THE FARMER'S MAGAZINE:

MARCH 1808.

(No. XXXIII.)

BRANCH I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Strictures on the Honourable Baron Hepburn's Outline View of the Corn Laws, with their Causes and Effects.—See Vol. VI. p. 150.

SIR, *Glasgow, September* 14, 1807.

THE paper of Baron Hepburn in the XXII. Number of your Magazine, upon which I am about to offer some remarks, professes to give 'An Outline View of the Corn Laws, with their Causes and Effects.' Had the execution of the work at all corresponded with this profession, the Baron would have conferred a signal service upon his country. But really I was disappointed in the perusal of an essay, the subject of which, it would appear, has occupied the attention of the writer for a great number of years, and upon which he seems to look with no small complacency. As the title bears, I expected a sketch of all the laws, and particularly the more modern ones, relative to corn; but I could find little or no notice taken of the various acts of Parliament passed in regard to the trade in grain. I could not trace the causes which called these laws into being, nor the effects which their enactment had upon the welfare and comfort of the community. Had he entitled the paper 'On the advantages of a Bounty upon the exportation of Corn,' I should at least have given him credit for making the work correspond with the advertisement. This, however, would have been too humble a title-page for a writer who evidently seems to consider himself so well

qualified to publish upon a subject, which, I am afraid, requires more comprehension of views than what falls to the honourable gentleman's share.

The Baron says, 'The great point at issue betwixt the contending parties, may be condensed into these two questions. Shall we have at all times a free open trade in corn, without bounty upon exportation, and without restriction as to importation from foreign countries? or, Is it more wise and salutary for the nation, that the export of corn in plentiful years should be encouraged by bounties, and the importation of foreign corn prohibited and restricted to cases of necessity; that is, when the home produce of corn, from an accidental bad season, threatens famine?' I do not well know whether or not the Baron's pericranium be a little confused, or if his arithmetical education be but slender. Be that as it may, it is very evident that, instead of two, there happen to be three questions upon which writers are not yet at one, and in all human probability never will. The first relates to the expediency of a free trade in corn, unfettered by any law or statute whatever: the second, to the propriety of giving a bounty upon the exportation of corn, except in cases approaching to famine: and the third, relates to the expediency of prohibiting the importation of foreign corn below a certain price. These are three different views of the subject that have been taken by a variety of writers upon the corn trade, all equally wise in their own conceit. Which of them has the merit of being in the right, I shall not pretend to decide so authoritatively as Baron Hepburn; but, I flatter myself, with as much show of reason upon my side.

I shall, in the first instance, treat of these three questions, generally; and shall then take the liberty of occupying a few of the pages of your Magazine with noticing some of the arguments introduced by the Baron in support of his favourite theory.

1*st*, 'As to the expediency of a free trade in corn, unfettered by any law or statute.' No person of the smallest understanding can read the illustrious author of the Wealth of Nations, upon this branch of political economy, without feeling the irresistible force of his arguments in favour of an open free trade in corn. This great man, however, who has been oftener read than understood, limits the doctrine to its abstract meaning or signification. He contends, that all trades ought to be free, and of course that of corn among the rest. If, however, this universal state of freedom in the commercial world be any how deranged, he does not contend that the corn trade, or any other, ought to be kept open, while the others are in a state of thraldom. It is the abstract question only, for which he fights; and certainly he comes

comes off victorious from the field of battle. In the present state of commerce, there is no such thing as freedom; every particular branch of trade is fettered by the selfishness and stupidity of rulers. A man cannot clothe his very nakedness without paying double price for a pair of breeches, to a neighbour, than what he can import that very necessary piece of dress from a distance. The sugar that sweetens his punch, and the rum, without which it could not be made, keeps him, by its artificial price, much oftener sober than he would otherwise be. In such circumstances, it is very evident that an open free trade in corn would be a perfect anomaly amid the clanking of so many chains. Political economy, to be sure, has the singular glory of preaching freedom in the commercial world; but it contends not for a partial, but an universal liberty. When it finds a particular branch of trade with its wings clipt, and its hands tied up, it admits, though not without regret at the cause, the necessity of a similar treatment towards others. Upon this principle, and in the present shackled state of the commercial world, I apprehend that an open free trade in corn cannot be defended with any appearance of plausibility. Indeed, if there be any branch of trade, for the sake of which I would abandon my creed of liberty, it would be for that of grain. If there be any one article of commerce which, taken out of the general rule, merits greater encouragement than others, it is surely that of corn; the most important, infinitely, and in every point of view, to the happiness and comfort of the human race.

2*d*, 'As to the propriety of giving a bounty upon the exportation of corn, except in cases approaching to famine.' The argument in favour of a bounty upon the exportation of corn, is founded upon the encouragement it gives to agriculture, by holding out to the cultivators of the soil a perennial outlet for the raw material. All the excellence of a bounty rests upon this simple proposition; and it is very evident that the benefit, great as it may be, is under deduction of all the cost and expense attending it. Now, if this encouragement can possibly be afforded to agriculture by any other means than a bounty upon the exportation of corn, and at the same time without any outlay, I cannot see the necessity of resorting to an expedient which obviously cuts both ways. Supposing the annual consumption of corn in Great Britain to be 10, and the quantity of it raised 5, it is very evident that there is a great field to the encouragement of agriculture between the lesser and the greater number. For a long time the country must be under the necessity of importing; for it is no easy matter to double the quantity of grain capable of being brought to market. Here, then, is an encouragement to husbandry, cer-

tainly of sufficient importance to call forth all the energies and industry of the farmer, without the expense of one farthing to the nation in the shape of a bounty. Would it not be the very acmè of absurdity, for the nation to be paying to certain individuals concerned in the corn trade, large sums of money by way of bounty, and the very same nation paying at another time a high price for foreign corn imported? This is the candle burning at both ends with a witness. Until more corn be raised than what the inhabitants of the country can consume, it is unnecessary, if not mischievous, to give a bounty upon the exportation of corn. Unless our consumption be much beyond our produce, and we know the reverse to be the case, it appears to me that the Baron, to say no worse of him, is at least premature in his zeal for the landed interest.

As the consumption of this country greatly exceeds its produce, and of course sufficient encouragement is held out to the farmer, I might pause here, and not pursue the flying enemy any further. But supposing that, by magic, more corn was raised than could possibly be consumed, still, with all due deference to the Baron, I do not see the imperious necessity of a bounty upon the commodity. I very much suspect that the great increase in the stock of corn would bring along with it a corresponding addition to the number of mouths; and that, although produce and consumption might bear a nearer relative proportion to each other at one time than at another, it might be contended, that the former could not surely take the lead of the latter. If the produce were to get before consumption for the period of a few years, it does by no means follow that agriculture would be neglected, and farms go to waste, although it might be admitted that farmers would slacken in their exertions, corresponding to the defalcation in the demand. Really I do not see any benefit to be derived to a nation raising more corn than it can consume, *communibus annis*, provided that nation be so circumstanced as not to be affected by any of those causes which at present press down the population of the greater part of the world. This expansive power of population will, in my humble opinion, hold out sufficient encouragement to the farmer not to relax in his exertions; and if the excess really did happen, of produce above consumption, then the remedy of the Baron might be applied to the disease. In our day, no such change of circumstances is at all probable; and while there are so many real diseases in the political body which call loudly for a speedy cure, it seems to be abundantly childish to be at the trouble of taking measures to anticipate what in all human probability never will happen.

3*d*, 'As to the propriety of prohibiting the importation of corn from

from foreign countries below a certain price.' This question is necessarily involved in the decision of the first, or is rather a counterpart of it. If a free trade, in the present circumstances of the commercial world, would prove injurious to the country, it follows, as a matter of course, that the importation of foreign corn below a certain price, must also be prohibited. It would be a waste of time, and of the precious room of your Magazine, to expatiate upon the reasons which imperiously forbid the importation of foreign corn. Suffice it to say, that if other articles of manufacture are not permitted to be imported below a certain price, or, in other words, upon payment of a certain duty, and several of them not at all, it does not seem in any degree reasonable to make an exception in favour of that of corn, and to render that trade open while all the rest are in a state of bondage. By this policy the landed interest, I mean landlords and tenants, would suffer in the dearer price of the clothes and drink which they had occasion to purchase, and at the same time be undersold by foreigners in the corn market. If, by the absurd restrictions upon trade in general, they are to be losers in any way, they ought to be permitted to be gainers in the other. Justice can only be done to this class of people by prohibiting the importation of corn below a certain price. This price it may be a little difficult to ascertain and determine; because, if too high, then the level, between the raiser of corn and other manufacturers, is destroyed, to the gain of the former; and if too low, then *vice versa* to the advantage of the latter. I remember very well, at the passing of the late corn law, that a great outcry was raised against the landed interest by the manufacturers in the west of Scotland; but I would just ask these active gentry, if they would be well pleased at the free importation of India muslins, or any other commodity, without paying duty, which would interfere with their favourite manufacture. It was, however, but the interested cry of a commercial party; for the reasonable part of the public soon became sensible, that the rise which then took place upon the rates of the importation of corn, would do no more than put the price of that commodity upon a level with others.

The whole of Baron Hepburn's elaborate paper, is occupied with demonstrating, as he no doubt flatters himself, that there can be no assurance of plenty of corn in this country, without a bounty upon the exportation of that article. He supposes the average yearly consumption of corn to be 12, the average yearly produce 12, and the fair price of that article to be also that number. Now, says he, if a plentiful season shall produce 15 of bread corn, it is obvious, that, without an exportation, the surplus produce of 3 above the annual consumption 12, is superfluous to the state,

and to the industrious husbandman ruinous; because, instead of getting 12 for his 15, he gets only 10. Upon this paragraph I have to remark, that it is a very easy matter, indeed, to make a a supposition; and the person doing so, will certainly form it in such a way as to serve his own purpose. The materials are at hand, and at his disposal; and the devil is in it if he does not fashion the work to his own liking. I shall not deny that a plentiful year, in the kindness of Providence, may occur, so as that the quantity of corn may be augmented in the ratio of 25 *per cent.*, or as 15 is to 12. It does not, however, necessarily follow, that for this 15 the farmer will get only 10. Perhaps the supposed annual consumption of corn, stated to be 12, is owing to the price of the article being at such a rate as not to admit of the inhabitants purchasing a greater quantity, and, of course, eating more. To use an old adage, 'they must cut their coats according to their cloth.' In the event of a more plentiful year than they have been accustomed to, they will have exactly the same sum of money to share; and from their previously having room on their stomach for more bread, they will, of course, pay all that they are possessed of, namely, the 12 for the 15. Besides, it by no means appears to me, that the farmer is to be ruined because their happens to be one plentiful year in the cycle; for, judging from past experience, he is not alarmed at a repetition even of favourable seasons, and will therefore keep the superabundant crop by him till the price of it rises. If a long series of such plentiful years were to happen, I do admit that the farmer would lessen his breadth of sowing, in such a way as that the produce might bear a juster proportion to the consumption than it used heretofore to do. Nothing more would happen; and the famine, as stated by Baron Hepburn, would not follow upon the back of superabundant plenty. The farmer knows very well, that from the produce of grain having been 15, and the consumption only 12, the former is in too great a *ratio*; and therefore, to bring the proportion back to its former footing, he has only to discontinue the raising of grain to that extent. He will not abandon it altogether, as the Baron seems to think; for, besides carrying the joke further than what the state of the case requires, he would very probably be a loser, by having too small a quantity of land under tillage.

The Baron being aware, as no doubt he may, of many persons smiling at this fanciful theory, proceeds to state the facts upon which it is built; and these are said to have been collected, principally from the statute-book, or from history. 'If,' says he, 'my memory does not much misgive me, I think I might appeal to Suetonius, to prove that Britannia Romana, or the Roman Province in Great Britain, was considered to be one of the corn countries,

countries, from whence the Romans drew a regular ſupply of bread-corn for their armies, and occaſionally to Rome herſelf, when the crops of Italy and Africa failed to yield their regular ſupply.' In a matter of hiſtorical evidence, I would humbly recommend to the Baron not to truſt again to his memory, or, at any rate, to have the ſenſe not to tell his readers that he does ſo; for I can aſſure him, that, upon the preſent occaſion, he appears to be ſo very uncertain of the fact himſelf, that I would not believe one word of it, did I not know from other ſources, that it is partly true. This fact is brought forward to prove that this country raiſed more corn in the days of the Romans, than it does at preſent, which I by no means think is in the ſmalleſt degree proved. In the 1*ſt* place, It was only one part of Great Britain, and that, no doubt, the moſt productive, from which the Romans drew their ſupplies, ſometimes even to the capital itſelf. 2*d*, From the Romans not getting grain from other quarters, it may fairly be preſumed that theſe places could not ſpare any. 3*d*, Although Poland, at preſent, exports corn, will it be ſaid that, acre for acre, field for field, it produces more corn than what is raiſed in Great Britain, which, with all its excellent cultivation, imports very conſiderably. It is ſaid, that the ſupplies which the Roman part of Great Britain afforded the maſters of the world, were regular, and ſometimes, indeed, ſtood between them and famine, when the crops in Sicily and Africa failed in their uſual produce. Hiſtory has trumpeted forth not a little the praiſes of a Sicilian crop; but it never pretended to tell a too credulous poſterity, that Great Britain, comparatively ſpeaking a ſavage and barren country, beat it hollow in the production of this eſſential commodity. Baron Hepburn, however, in good faith, and in his ſenſes, would inſinuate as much. This gentleman gets hold of a political fact, which he turns and twiſts to his particular purpoſe, and pretends to ſqueeze ten times more out of it than it is capable of yielding. His premiſes are meagre and ſcanty; but his inferences are without number, and in the face of all probability and common ſenſe.

But ſuppoſing that this impoſſibility was really the fact, and that Great Britain, in an age of barbariſm, produced more corn than it does now in a ſtate of high cultivation, I would aſk the Baron, if there was, at that period, a bounty upon the exportation of corn? If there was none, and I believe our forefathers never dreamt of ſuch a thing, how could this great exportation, according to his theory, take place? Here, then, at one period of our hiſtory, a bounty upon importation was unneceſſary; and if ſo at one period, why not another? I leave it with the Baron, how to account for what, in his apprehenſion, is impoſſible; and

I do think, that he will find it no eaſy matter to reconcile the fact of which he is himſelf the author, with the tenor of his previous reaſonings.

'Were it german (ſays he) to my preſent ſubject, it would not be a difficult taſk to eſtabliſh, by preſumptive evidence, that England, towards the cloſe of that reign, was in a ſtate of more generally productive cultivation, and not much leſs populous than it now is.' In ſupport of this hypotheſis, he refers his readers to the map of Britannia Romana, covered with villages and townſhips, without chaſes, commons, or extenſive deer-parks. Now, Britannia Romana, as has been already remarked, was only a portion of the kingdom; and therefore, this evidence in regard to it, even if it were concluſive, does not extend to the whole iſland. Beſides, a perſon talking of the preſent population of Great Britain, would make uſe of the very words of the Baron, and point out to the eye the numberleſs towns and villages, which, in the ſouthern part of the kingdom at leaſt, ſtud the whole face of the country. If the gentleman believes in the non-exiſtence of chaſes and deer-parks, at a period when hunting was the order of the day, and in the nonentity of commons, when agriculture was but in its infancy, I pity his credulity, and wonder at his folly, in publiſhing it to the world. I for one cannot conſent to forego any little underſtanding I may be poſſeſſed of, and follow his example.

In the year 1266, it ſeems that wheat ſold at 3s. 1d. of our money, per quarter; and only four years afterwards, 1270, it roſe to the enormous price of 19l. 16s. 9d.; and this dreadful riſe is attributed ſolely to there being at the time no bounty upon the exportation of that commodity. I ſhall admit, for the ſake of argument, that the farmer of thoſe days could not afford to raiſe a quarter of wheat for 3s. 1d.; but I deny moſt poſitively, that there was any reaſon for abandoning almoſt entirely the cultivation of that article. It is moſt evident, that the raiſer of corn, like any other manufacture, will be at the trouble and expenſe of cultivating it no longer than it continues to reimburſe him; and therefore, when he finds that too much is raiſed for the average annual conſumption of the country, he curtails to that extent his arable land, but does not abandon it altogether. I ſhould imagine, that if the Baron had been able coolly and diſpaſſionately to weigh the cauſes of the ſcarcity in 1270, he would find that it aroſe partly from the diſturbed ſtate of ſociety at the time, and the dearth that happened in the previous year. This ſcarcity, I apprehend, was but little, if at all, occaſioned by the abandonment of cultivation, but almoſt entirely by one of thoſe unforeſeen viſitations with which it pleaſes Providence, now and then, to afflict the human

human race. It is astonishing to me, how any person, at all acquainted with agriculture, can believe, that the culture of grain may be abandoned, and sheep-feeding introduced over the whole surface, in the course of four years. Changes in farming are not so rapid in their motions, as in other manufactures; and an alteration of so very wide and important a nature, could not possibly take place, but after a long lapse of time. About this period, wool became an article of exportation; and this circumstance affords Baron Hepburn an argument for inferring, that sheep-feeding had nearly supplanted the raising of grain; for he could not well banish the one, without putting the other in its place.

I am very unwilling to deny what a gentleman is pleased to say; but, giving every credit to the high prices which a scarcity necessarily produces, I must be excused from believing, that what was, in 1266, 3s. 1d. per quarter, rose, in four years thereafter, to 19l. 16s. 9d.: there must be an arithmetical error in this statement, somewhere or other. It is really wonderful, with what facility this gentleman presses the whole table of arithmetic into his service. When convenient for his argument, he puts down his favourite figure, when, with equal propriety, he might as well have made use of any other in the whole compass of vulgar arithmetic. The price of an article depends upon a variety of contingent circumstances; and how he can have the face, in the 1805, to say, what would have been the price of that article in the 1260, had there been a bounty upon the importation, I cannot divine. He thought ten shillings a moderate rise upon the commodity; and therefore as it would not shock probability, he flattered himself that it would pass quietly with his readers without suspicion.

As a further proof that the excessive low price of 1266 led to the total abandonment almost of agriculture, the Baron quotes *verbatim* a statute in the reign of Henry the VII. I can very well understand that the low price of 1266 might have had the effect of damping the exertions of the farmer, and have induced him to sow a smaller quantity of corn than he otherwise would have done. This abandonment, however, to use the Baron's own expression, would have been exactly in the ratio of the want of encouragement to raise corn, and not a whit more. The moment that the quantity of grain diminished so much as to pay the grower a fair and reasonable price, the abandonment complained of would as naturally cease as it had begun. As it was the absence of encouragement which made the farmers relinquish the raising of corn, they would begin of new to increase their tillage the moment it returned; or, in other words, the abandonment would be no greater than the want of encouragement. It is most evident, therefore, that the abandonment, which is represented by this

this writer to have been nearly total, never could have fallen below the point of failure of encouragement; and this want could extend only so far as to allow the extra quantity of grain to be consumed; and things would then proceed as before. If, therefore, it be true that the production of corn had become so very unfavourable as stated by the Baron, it could not have been owing to the low prices of 1266, for that evil would have cured itself by an after rise in the price of the article. Other causes must have produced the effect, the civil wars, want of personal security, and others of a civil or political nature.

This statute is a lamentable instance of the futility of acts of Parliament, and the stupidity of legislators. If corn husbandry had so much decayed, it must have been owing to a want of encouragement in the cultivation of the soil, and this again to some political cause or other. In order to prevent any further decay, one would imagine that the plain and obvious path was to remove the obstacles in the way of the culture of the soil. This, however, the royal legislator does not attempt; because, I imagine, that he either did not choose to give himself the trouble, or was unable to discover the causes of the alleged decay. The removal of abuses, we know very well, even in our day, is too herculean a labour for the shoulders of a legislator of the blood-royal; and, therefore, we need not be surprised that Henry the Seventh did not make any attempt to clean the Augean stable. His Majesty does what is the most easy for him to do; he passes an act of Parliament ordering his loving people to put a stop to the progress of further decay, as if they either could or would obey his royal mandate. The decay of which he complains had arisen from causes beyond the controul of his people; and how could they, even with the assistance of an act of Parliament, prevent the continuation, of which they could not ward off the beginning?

By a statute of Henry the Eighth, it was enacted, that no man should keep above 3000 breeding ewes, of which the Baron thinks the object was twofold; 1*st*, To destroy a monopoly, which had raised the price of sheep from five to eight shillings; and, 2*d*, To compel them to turn a portion of their immense capital from the feeding of sheep to the cultivation of the soil. I do not, for my part, see how large flocks of sheep should necessarily raise the price of the animal. The fact merely proves, that there were at that period some very extensive graziers, but not a tittle more. If the total number of sheep was one million, and the feeders only ten, then, no doubt, the small number of sellers would combine, and dispose of the mutton at their own prices. This, however, is supposing there were no small feeders, which is begging the question; for that fact is nowhere mentioned in the

the statute. If, therefore, the number of small feeders were in a similar proportion to the large, which we are bound, for aught we know, to presume; then the numbers of this useful animal must have been very considerable, and no monopoly, of course, could take place. I believe that the second reason stated by the Baron was the actual one, for it tells well enough; but how could the object of it possibly be accomplished? A feeder of 6000 breeding ewes, finding that he could not by law keep above 3000, might, by a very simple contrivance, elude the act altogether. He could easily divide his *quondam* flock of 6000 into two of 3000 each, and give the command of one of the corps to a first or second cousin. The monopoly, against which the thunder of the statute was directed, would not be in the smallest degree affected by it; and not a single farthing would be abstracted from the feeding of sheep, and converted into a capital, for the better cultivation of the soil.

Henry the Eighth could not be supposed to be much wiser than the Seventh of the same name. Had he been in the slightest degree acquainted with the principles of political economy, he would not have put himself to the smallest trouble about lessening the number of sheep, or attempted to force his subjects to raise more grain than they were willing to do at the time. The fact is, that the feeding of sheep, and the cultivation of the soil, should be left totally to themselves; and the demand for mutton and loaves will regulate the number of the one and the quantity of the other. If a great number of sheep be fed, it is plain that there is a demand for them; and why should not the lovers of mutton be indulged in the pleasures of the table? It is ridiculous to enact a statute prohibiting the feeding of any more sheep, with the view of encouraging the growth of corn; for if there has been no previous interference of the Legislature, we may be assured, that the feeders of the one, and the raisers of the other, brought to market exactly according to the demand: If too little of the one or the other has been brought to market, then more will; but it is totally impossible to force more than what there is a demand for, or for which there happen to be purchasers.

It is said by Baron Hepburn, that, 'in a subsequent reign, a tax upon corn exported seems to have been one of the ways and means for raising the revenue:' but in what reign this financial regulation was introduced he does not mention. The fact proves, that there was, at the very moment the Legislature were exhausting all their ingenuity to augment the quantity of corn in the country, more of it in the market than what could be consumed at home. Why then force the production of a further quantity, when the consumption of the country was unequal to the produce? or how could such an absurd regulation ever be enforced?

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'It is a fact' (says he) 'that at a very early part of that period, the interest of money was reduced from 7 *per cent.*, which Charles the Second always paid, to 5 *per cent.*; and during the whole of it, money generally was borrowed at 4 *per cent.*, or at least during the best half of that period; and until I shall be better informed and instructed, I shall hold that this diminished value of money arose from the sudden and unexpected influx of so large a supply which the export of corn produced in the land.' That an influx of money into the country should arise from the exportation of corn, as it will do from that of any other commodity, it would be as ridiculous to deny, as it is senseless to state, with so much parade, what is evidently a truism. But it is pushing the admission by much too far, to attribute the increasing wealth of Great Britain solely and entirely to this cause. The country had now begun to recover from its revolutionary struggles; and, by applying itself to those arts of industry which a state of tranquillity never fails to encourage, had made some little progress in the career of general prosperity. Does Baron Hepburn suppose, that the nation was successful only in the raising of corn, and that, in all the other manufactures of the country, she was, if not a loser, at least no gainer. Besides, unfortunately for himself, this gentleman gives *data* by which his arguments are overturned. Like some of the judges of a Supreme Court, but which shall be nameless, he might probably have escaped without detection, had he not been bold enough to indulge your readers with his *ratio decidendi*. The exportation of corn is said to yield to the country half a million of money annually, which, when multiplied by 70, the whole of the period during which this great prosperity took place, a total sum of 35 millions is produced. Now, it is very palpable, that unless the country was gaining from other sources than that of corn, no such fall in the rate of interest could possibly have happened. Nothing but an universal prosperity over the whole face of the kingdom, can account rationally for so great a depreciation in the value of money.

'The two millions that, in the 1795, we paid to the Americans for corn, intercepted and afterwards detained, and the six millions we paid for foreign corn, and for bounties to foreigners to fetch it, in the year 1796, was the sole cause of the stoppage of the issue of specie by the Bank of England. The foreign subsidies we paid were a mere drop in the ocean.' Every evil under the canopy of heaven is conjured up by the affrighted imagination of the Baron, as arising from the importation of foreign corn; and the payment of a sum, no matter how large, in any other way, does not effect the nation in the smallest degree. If the exportation of specie in the purchase of bread corn be greater than

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in the payment of subsidies to foreign powers, then the former will be more injurious to the State than the latter, in the proportion exactly of the greater advance. It is a question of figures, and nothing more; so that the comparative bad effects of the two kinds of exportation can be settled without the smallest difficulty, by an appeal to the Rule of Three. The nature of the injury inflicted is, in both cases, the very same; and the body politic suffers exactly in the extent to which it is carried. The Baron very wittily tells us, that the money paid away in subsidies resembles pigeons in a dove-cot; and, like these birds, very soon returns to the country from which it had originally emigrated: but the money expended in the purchase of foreign corn remains for ever locked up in the strong boxes of the raisers of that commodity upon the Continent. It is singular to see a man of the Baron's time of life and experience talking so simply upon a subject so very plain and so easily understood. In the case of subsidies, the money is spent in the country to which it is remitted, and comes in process of time to be circulated among a vast variety of different people, as much so as that which brings home the corn from the Baltic. In both we find the cash equally spread over a wide surface, and, to all appearance, lost for ever to the nation. It is the property, however, of industry, always to attract money to itself; and as this country manufactures, cheaper and better than other nations, almost every species of raw material, the money which has been remitted to the seller of corn, or the dealer in blood, finds its way back to the spot from which it had originally started. It is upon this simple principle that the general and unexampled property of Great Britain is to be explained, notwithstanding of the prodigious losses it has sustained by the numberless wars in which it has been successively engaged.

I am really now tired to death with examining a paper which, we are told, had acquired some celebrity in its day; but for what reason, the readers of these remarks will perhaps wonder at. It is impossible to move one step, without stumbling upon some irrelevant quibbling or fallacious argument; and, though a little scandal may be occasionally pleasant enough, it is tiresome to a degree to be perpetually finding fault. I might continue and multiply these criticisms without end: but really, where there is so much to blame, the subject of our censure ceases to be deserving of further notice, either from the writer or the reader.

I am, Sir, your most obedient servant,

A Constant Reader.

FOR THE FARMER'S MAGAZINE.

Mr Salter's Method of improving Grass Land. Communicated by SIR JOHN SINCLAIR, *Bart.*

To the Rev. St John Priest, Secretary to the Norfolk Agricultural Society.

SIR, *Whinbergh, 25th October*, 1805.

As our president, Mr Coke, has expressed himself in terms of approbation so highly gratifying to me upon my method of improving poor pastures and boggy meadows, and particularly when he honoured me with a visit this summer for the purpose of examining a meadow which was then in its highest state of improvement, with a crop growing upon it; I readily comply with your request, and have sent you the best information I can, of the method which I have pursued, now ten years, in that line of farming; a method which originated in accident, but which has been ever since carried on systematically.

At Michaelmas 1795 I entered upon this farm, consisting of upwards of 600 acres, of which the greatest part is wet, springy, cold land. There were at that time about 100 acres of bad meadow, so overrun with rushes, sedges, and all sorts of aquatic plants, that no sheep had ever been known to be pastured upon them; whereas, for the last eight years I have not had a single instance of a rotten sheep. I first cut the rivulet which runs through the meadow, 352 rods in length (reckoning seven yards to a rod), and eight feet wide. I also cut 1116 rods of open drains; and the turf or sods which came out of them, I laid to dry in the months of February and March; and as soon as dried, I gathered them on large heaps of sixty and one hundred loads, and burnt them to ashes. On the 2d of April 1796, I dibbled about two acres of that part of the meadow which was most dry, and immediately I carried on, in half-load tumbrils with broad wheels, about 15 loads per acre of the turf ashes: then I sowed 16 or 18 pounds of Dutch clover, and four bushels of rye grass, *i. e.* eight or nine pounds of Dutch clover, and two bushels of rye grass, per acre. These I brushed with a pair of harrows bushed, and rolled three or four times with a very heavy roll, in order to make them as firm as possible. Upon that part of the meadow which was boggy and rushy, I laid from 80 to 100 tumbril loads per acre of sand, fine gravel and mould, as I could most conveniently come at them, cutting and carrying away every hillock or waste earth which I could find. Having harrowed and rolled this, I dibbled upon every acre two bushels of summer vetches, one bushel of early grey peas, and two bushels

shels of Poland oats, all mixed together; and then sowed Dutch clover and rye grass as I did upon the dry part of the meadow, in which I omitted the oats, knowing they would not have succeeded.

In dibbling thus, the holes ought to be four inches square from each other, and from two to four seeds should be put into a hole. Peas and vetches thus growing upon grass land, whether on low meadows or dry uplands, have never failed, with me, of having excellent effect. They entirely destroy moss, and ameliorate the soil. It is to be observed, that upon dry uplands I omit the rye grass. When the crop is forward in the pod, I mow it for hay; and as soon as it is dry, I put it up in small cocks, and then into large ones, so as to prevent the leaves from falling off. If I do not want this hay for my sheep, I cut it for my horses; and it is so nutritious, that it serves both as hay and corn.

In the year 1803 I grew 30 acres of vetches, peas, and oats, managed as above. The crop was not less than from two and a half to three loads per acre. By a load you know I mean, as much as a waggon drawn by four horses can carry. In the same year I sowed 100 acres of turnips three times over, and at last ost my whole crop, except a single turnip. I had 532 breeding ewes to maintain in the following winter. Having provided 30 troughs, 12 feet long, and a straw-cutting machine (which with a horse will cut ten coombs an hour), I cut the hay made of the vetches, peas, and oats, and thus fed my sheep, which produced me a greater number of lambs, and a greater quantity of milk for the lambs, than I ever had from turnips. They were kept in the straw-yard from the 10th of October to the middle of April; and thus I kept them last year, and shall always keep them whilst I remain upon a heavy-land farm. They eat the straw well, and make a far better yard of muck, than that from bullocks. It was by much the best muck I ever had, except a yard of muck, where I fatted 220 pigs, by scattering peas about the yard. As a proof of my success in lambs in the year 1804, you know, my shepherd, Thomas Nunn, gained one of the premiums (five guineas) from the Society.

In February 1805, a seventeen-acre meadow was become solid. I filled up the open drains, and cut 995 rods of under-drains, which I filled up, part with bushes and part with stones. Upon April 4th, I began to dibble vetches and peas; then carried on about 15 loads per acre of outhollowing, muck, and mould together; sowed Dutch clover and rye grass, and brushed them as usual. The crop was abundant;—I got 63 loads of hay from the

17 acres. This was the meadow which Mr Coke, Mr Gurdon, you, and other gentlemen, admired so much, and deemed an improvement in the management of grass land deserving of high commendation.

I will not omit to tell you from what accident this method of managing grass lands originated. In the year 1784 I had a piece of grass land eaten up by grubs. I sowed vetches upon it, and harrowed them. They produced so good a crop, that I have continued the practice to the present time. Indeed I carry it on in every instance where I can; for whenever my leas of clover fail, instead of breaking them up, I dibble or drill vetches early in the spring. It is worthy of remark, that the rye grass and Dutch clover upon my meadows come much earlier, and grow faster, than the leas upon my arable land.—Be assured, that I shall have pleasure in attending you to Reepham, to examine your pastures there, in order to *salter* them, as you are pleased to call my method of improving grass land.

I am, Sir, your obedient Servant,

WILLIAM SALTER.

P. S. I as often use the drill roll for the vetches and peas, as I do the dibbles. Please to observe also, that I never plough, pare, or scarify my grass lands.

FOR THE FARMER'S MAGAZINE.

On the proper Kind of Seed Wheat, and the Causes of Smut and other Disorders to which that Grain is liable. By Sir JOHN SINCLAIR, Bart. President of the Board of Agriculture.

THERE is reason to believe, that the practice of using young seed, instead of old seed, has greatly contributed to occasion the smut, and the other disorders to which that grain is liable. Any thing that weakens the plant, must sooner or later be the parent of disease. Now, young seed germinates immediately, and the flour it contains is not so thoroughly ripened; hence the young plant must be weaker: Whereas, old seed lies for a considerable space of time in the ground before it germinates; takes a stronger hold of it; the flour by which the young plant is at first sustained, is in a more perfect state; and the plant itself, being stronger, is consequently less liable to disease. In men, and other animals, *gradual growth* is a great sign of health and longevity; and why should not the same principle extend to vegetables? It is observed, that the

the fine thin skinned American wheat, is very apt to suffer by the mildew, owing, it is supposed, to the same circumstance, of early or too rapid germination.

It is probable, that the practice of using young seed, might be introduced in times of scarcity, when the high price tempted the farmer to dispose of the whole of his old stock. Its speedily appearing above ground, might be an argument in its favour, without adverting to the after consequences, which might not be observed at the time, or attributed to other causes. I am informed, that a Mr French of Balliricay, who farms in the hundreds of Essex, constantly uses old wheat; in that respect imitating the example of his father, who was led to the practice, by finding that old seed was in general cheaper than new. It is said, that neither he, nor his son, ever had smutty wheat; and their crops have always been remarkably good. In their practice, provided the seed was sound and sweet, size or bulk was not much regarded; age being the principal object attended to.

These observations are made for the purpose of calling the attention of farmers to so interesting a subject of inquiry. It is to be hoped, that many experiments will be tried, in various parts of the country, for the purpose of ascertaining the important fact, whether new or old seed ought to be preferred, and the grounds thereof.

It would be of great use to ascertain, *1st*, Whether the wheat should be preserved in the straw, or in sacks. *2d*, Whether young seed, if it must be used, might not be improved, by being gently kiln-dried, so as not to hurt the germ: by this practice, the grain might be consolidated, and the flour, on which the plant must at first be maintained, more fully ripened. *3d*, Whether the substance which occasions smut, and which must possess animal or vegetable life, is not destroyed, or at least weakened, by the wheat being kept for a year. *4th*, Whether steeping is as necessary for old wheat, as for new. And, *5th*, Whether it is not owing to the weakness of the plant, and not to blights, or other aerial influences, that it is liable to smut, and other disorders. It is singular, that spring wheat is less liable to mildew, and other disorders, than winter wheat; which perhaps may be partly owing to the circumstance, that it never can be sown till several months after it is produced.

The points above alluded to, can be ascertained with peculiar advantage this year, as old wheat is still sufficiently abundant to be used on a large scale.

It is to be hoped, that many experiments will be tried in the course of the season, and that the result thereof will be transmitted to the Board of Agriculture, to whom such information

must be particularly acceptable. Indeed, those who communicate experiments upon this subject, will be well entitled to the thanks of the Board, and of the country.

This paper having been transmitted to Mr Arthur Young, he returned it with the following remarks.

'The advantage of sowing old seed has been long known in Gloucestershire, and generally practised on the Cotteswold hills, where they sow so early, that they cannot use new seed; and there they do not steep on that account. In my Report for Norfolk, p. 299, you will find trials and practice. See also Bannister's Synopsis, p. 84. I have sown old seed repeatedly, and never knew it smutted. See Essex Report, Vol. I. p. 302.'

FOR THE FARMER'S MAGAZINE.

Letter from a Corn Agent in London, to a Gentleman in Scotland, explaining the Methods used to ascertain the Average Prices of Grain. Communicated by GEORGE DEMPSTER, *Esq.*

SIR,

WE yesterday had the pleasure of receiving your esteemed favour, with an order on Pybus & Co., for which we thank you, and which is at your credit. Respecting your queries as to the quotation of prices of grain in the newspapers, we must state, that all sales of grain made on the Corn Exchange of London, are returned weekly to the clerk of the market, with the prices and buyers' names; which return, is given by him, to persons appointed by law, called Receivers of Corn Returns, and from which account, a weekly average is published in the London Gazette. The quotations in the papers are general, and alluding to the general prices; and where an extreme price is given, it must be presumed, that the article producing it, is of an extreme quality, and *vice versa*; which quotations could not properly be inserted in a list of prices, purporting to be the general prices of general qualites. We have, however, a monthly publication of a price-list, which we beg to send you enclosed; and which will, we conceive, explain what you wish; and to which, it may be added, that, in looking at quotations of prices of the same day's market in different papers, you will find much variety.

The following is the monthly publication referred to in the above letter.

WOOD-

WOODHEAD'S MONTHLY STATEMENT *of* WHEAT, FLOUR, *and* BREAD, *in* LONDON *and its* ENVIRONS, *for August* 1807.—LEIGHTON, *Mayor.*

MEAL-WEIGHERS' REPORTS.

Date of Report Monday.	Quantity of Quarters returned.	WHEAT. Prices per Quarter. highest		lowest.		Average.		General Prices of Flour per Sack.		
	Qrs. Bus.	s.	d.	s.	d.	s.	d.	s.		
August 3	4334 5	90	0	56	0	70	0	63	64	65
10	2128 2	85	0	55	0	71	5½	63	64	65
17	4560 7	88	0	56	0	72	9½	62	63	65
24	3812 6	81	0	61	0	71	11½	58	60	63
31	6289 1	80	0	56	0	68	11½	58	59	60

			s.	d.
Total quantity	21,125 Q. 5 B.	—Aver. Salt included	71	8½
Last Month	16,922 5	—Ditto	73	5½
Advance ..	4,203 Q. 0 B.	Reduction ..	1	9½

Date of Report Monday.	Quantity of Sacks returned.	FLOUR. Prices per Sack. highest.		lowest		Average.		Wheaten Bread Quartern Loaf.
		s.	d.	s.	d.	s.	d.	d.
August 3	12,623	70	0	55	0	64	3½	11½
10	12,550	70	0	55	0	64	4½	11½
17	10,246	68	0	54	6	63	3½	11½
24	11,058	65	0	50	0	59	10½	11½
31	11,771	65	0	50	0	59	7½	11

			s.	d.
Total quantity	58,248 Sacks	—Aver. Salt included	63	1½
Last Month	58,244	—Ditto	65	0½
Advance	4 Sacks.	Reduction	1	11½

		s.	d.
Note.—WHEAT, Average per Quarter		71	8½
FLOUR, ditto per Sack		63	1½
	Difference	8	7

ASSIZE OF WHEATEN BREAD.

1807.	Average Price of Flour per Sack.		Add Baking and Salt thereto.		Total with Baking and Salt.		Price of Peck Loaf Wheaten.		Amot. of 20 Peck Loaves.		The Baker per Sack. Dr.		Cr.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Aug. 3	64	3½	14	1	78	4½	3	11	78	4			0	0½
10	64	4½	14	1	78	5½	3	11	78	4			0	1½
17	63	3½	14	1	77	4½	3	10	76	8			0	8½
24	59	10½	14	1	73	11½	3	9	75	0	1	0½		
31	59	7½	14	1	73	8½	3	8	73	4			0	4½

☞ The net Balance due to the Bakers, from May 19th to the present Time ..... } Fractions included } L. 819 13 1½

☞ The Assize of Bread being regulated by the Magistrate, or Magistrates, on Tuesday in every Week, the fluctuating Difference resulting therefrom, according to the Assize Table (operating for or against the Baker), the same is regularly entered in a Book for that purpose; and when the Balance thereof doth amount to the Sum of 1250l. (on either side) the Price of Bread is advanced or reduced half an Assize, or 20d. per Sack on 15,000 sacks of Flour (for one Week only) agreeably to the Acts of Parliament.

FOR THE FARMER'S MAGAZINE.

An approved Receipt for making Gooseberry Wine, which has often been miſtaken for Foreign Wine of a fine quality. Communicated by a Gentleman in Forfarſhire.

To each Scotch pint of full ripe gooſeberries maſhed, add one Scotch pint of water, milk warm, in which has been diſſolved one lib. of ſingle refined ſugar: ſtir the whole well, and cover up the tub with a blanket, to preſerve the heat generated by the fermentation of the ingredients: let them remain in this veſſel three days, ſtirring them twice or thrice a day: ſtrain off the liquor through a ſieve, afterwards through a coarſe linen cloth: put it into the caſk: it will ferment without yeaſt: let the caſk be kept full with ſome of the liquor reſerved for the purpoſe. It will ferment for ten days, ſometimes for three weeks: when ceaſed, and only a hiſſing noiſe remains, draw off two or three bottles, according to the ſtrength you wiſh it to have, from every twenty-pint caſk, and fill up the caſk with brandy or whiſky; but brandy is preferable. To make it very good, and that it may keep well, add as much ſherry, that is, a Scotch pint and a half of brandy, and as much ſherry together, with a quarter of an ounce of iſinglaſs diſſolved in water to make it quite liquid: ſtir the whole well. Bung the caſk up, and ſurround the bung with clay; the cloſer it is bunged, the better: a fortnight after, if it be clear at top, taſte it: if not ſweet enough, add ſugar to your taſte: twenty-two lib. of ſugar is the juſt quantity in all for twenty pints of wine: leave the wine ſix months in caſk; but after being quite fine, the ſooner it is bottled, the more it will ſparkle and reſemble champaign. The proceſs ſhould be carried on in a place where the heat is between 48 and 56 Farenheit's thermometer.

N. B.—Currant wine may be made in the ſame manner.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Letter from Mr Park, Secretary to the Selkirk Agricultural Club.

SIR,

WE have a Farmer's Club here, which diſcuſſes an agricultural queſtion every month: In March laſt the following one came under conſideration, viz. 'Whether will a field of dry ſand, within ſeven or eight miles of marl, in the courſe of ſeven years, produce more value to the farmer, by being kept in the four-break huſbandry and marled at the rate of 30 ſingle carts per acre; or by

or by irrigation, without the benefit of runners, from peat or marl moſſes?' There were thirty-three members preſent, of whom thirty-one declared in favour of the four-ſhift cropping; and I am deſired to tranſmit to you the reaſons on which their opinion was founded, with a requeſt to inſert them in your uſeful Magazine.

The Land, in its natural ſtate in both caſes, may be valued at 15s. per acre. The Expenſe of the Four-ſhift Cropping will be as follows.

1. Year.	To 4 ploughings, breaking and harrowing	L.2	8	0
	To 30 carts marl, prime coſt, carriage, ſpreading, &c.	7	9	0
2. ditto.	To 1 boll potatoe oats, at 22s. Linlith. meaſure	1	2	0
	To ſowing and harrowing ditto	0	5	0
3. ditto.	To ploughing, ridging and harrowing	1	8	0
	To 16 carts dung, carriage and ſpreading	3	7	0
	To ſeed (turnip) ſowing and hoeing	0	8	0
4. ditto.	To ploughing, harrowing and ſowing	0	12	0
	To 3 firlots barley, at 28s.	1	1	0
	To 12 lib. clover and 1½ buſhel rye graſs	0	17	0
	To ſtoning and rolling	0	8	0
5. ditto.	To mowing, making and ſtacking hay	0	10	0
6. ditto.	To ſowing, ploughing and harrowing	0	13	0
	To 1 boll potatoe oats	1	2	0
7. ditto.	To ploughing, ridging, harrowing, dunging, &c. &c. as in the 3d year	5	3	0
	Total expenſe for 7 years	L.26	13	0

N. B. The labour of reaping and thraſhing is ſuppoſed to be fully repaid by the ſtraw of the white crops.

The average Returns of Land, of the Value, and according to the Management abovementioned, are as follows.

1. Year.	Nothing	L.	-	-
2. ditto.	By 8 bolls potatoe oats, 22s.	8	16	0
3. ditto.	By turnips	5	5	0
4. ditto.	By 7 bolls barley, at 28s.	9	16	0
5. ditto.	By 200 ſtones hay, at 8d.	6	13	4
	Foggage of ditto	0	18	0
6. ditto.	By 9 bolls potatoe oats, at 22s.	9	18	0
7. ditto.	By turnip	5	10	0
	Amount of returns	L.46	16	4
	Amount of expenſe for 7 years	26	13	0
	Amount of clear profits	L.20	3	4

IRRIGATION.

To expenſe of farming an acre of dry Haugh or Holm-Land by irrigation - - -	L.5	0	0
Repairing and upholding ditto, for 7 years, at 5s. *per an.*	1	15	0
Mowing, making and ſtacking ditto, for 6 years, at an average only of 7s. 6d. yearly, on account of the inferior produce of the two firſt years - -	2	5	0
Total expenſe for 7 years - -	L.9	0	0

Average Returns of an Acre of dry Land under Irrigation.

1. Year.	Scarcely equal to the rent -	L.0	15	0
2. ditto.	By 40 ſtone hay, at 5d., ſpring bite and aftermath - -	1	2	6
3. ditto.	By 80 ditto, at 5d. ditto, ditto,	2	5	0
4. 5. 6. & 7. ditto.	By 120 ditto, at 5d. each year -	13	4	6
	Amount of returns in 7 years		17	7
	Amount of clear profits for ditto -	L.8	7	0
	Difference in favour of the four-ſhift cropping - -	L.11	16	4

In explanation of the above, I am deſired to add, that every article of expenſe in the four-ſhift huſbandry, is calculated at the higheſt rate of the country; and that the produce, eſpecially in new improven land, is not at all uncommon in this neighbourhood; though it muſt be admitted, that the ſame land, if ſown a ſecond time with clover and rye graſs, will only produce from 150 to 180 ſtone; and that, conſidering the uncertainty of our climate, we cannot reckon always upon ſo large a return of barley. The caſe, however, is the reverſe with reſpect to oats; and turnips, every year, are riſing in value. On the other hand, the produce of the irrigated land, is ſtated at fully more than it has hitherto yielded, upon a fair average of all the DRY haugh land that has been ſubjected to that operation. At the ſame time, there is no ſaying, from our experience, what additional increaſe may be obtained from perſiſting in that ſyſtem for a ſucceſſion of years; and there is not much probability of the annual expenſe greatly exceeding the ſum ſtated.

Your readers will obſerve, that the above relates entirely to dry turnip land. In other kinds of land, particularly ſuch as are inclined to be marſhy and to produce coarſe graſſes, irrigation has had the effect of correcting the quality and increaſing the quantity of the produce, far beyond the above ſtatement.

It

It may be proper to add, that the country all around us is *hilly*, conſiderably elevated above the level of the ſea; and that, though there is marl in the neighbourhood, no water coming from it irrigates any land. There are alſo many moſſes on the tops of the hills, from which the waters acquire a deep tinge after heavy rains. Such waters are conducted through the irrigated fields; but, from the weakneſs of the fertilizing quality in them, and coldneſs of the climate, the land is not thought to be ſo much enriched as might be expected.

Perhaps, alſo, irrigation may have the leſs effect here, on account of the thin population of the country; and, conſequently, the ſtreams little enriched by liquor from dunghills.

I am, Sir, your moſt obedient ſervant,

ALEX^r. PARK, *Secretary.*

Selkirk, 23. *September*, 1807.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Hints as to the Means of Preventing the Depopulation of the Highlands.

SIR,

MR DAVID LAURIE has tranſmitted to me, from the Weſt Indies, a number of obſervations which occurred to him, in the courſe of a tour through the Highlands, by which, in his apprehenſion, the depopulation of thoſe valuable diſtricts might be prevented, and the natives thereof uſefully employed. He has requeſted me to apply his remarks in any manner that I think beſt calculated for the benefit of his native country. In compliance with his wiſhes, I beg to tranſmit them for inſertion in your valuable publication, where they are likely to be peruſed by numbers of active and intelligent men, and preſerved from oblivion. I remain, Sir, your very obedient ſervant,

JOHN SINCLAIR.

Charlotte Square, Edinburgh,
12th June, 1807.

To Sir John Sinclair, Baronet, &c. M. P. &c.

SIR,

As it is well known that every communication, which has for its object the improvement of the Highlands of Scotland, will not only meet with your cordial reception, but be applied, through

your extenſive influence, to the moſt proper purpoſes, I ſhall, without any apology for thus intruding myſelf upon your notice, ſend you certain remarks that I was led to make, in conſequence of an excurſion through the greateſt part of that country three years ago. I once intended to have made them public; but the want of information regarding certain particulars, prevented me from putting my intentions into execution. From caſual reading, and from miſcellaneous obſervation, however, I am ſatisfied that my views are not only capable of doing much real good to the country, but that they have not heretofore been adopted by any other perſon. It is for this reaſon that, thinking it my duty to avail myſelf of the leiſure which my paſſage to Jamaica affords me, I have drawn up theſe remarks into as regular a form as poſſible; and I now tranſmit them to you, to be applied and made uſe of in any ſhape that you think beſt for the benefit of my country. I am conſcious that, in ſome things, my want of correct information may have ſomewhat miſled me: There is, however, nothing of that ſort which can affect the general principle on which my views are taken, eſpecially as I ſend them to one, who is not only well qualified to diſcriminate theſe errors, but who will alſo intereſt himſelf in giving to my intentions, in ſo far as they correſpond with exiſting circumſtances, that weight which their nature and their importance deſerve.

In common with you, and with every real friend to the Britiſh empire, I cannot but lament the depopulation that has taken place in the Highlands. I do not allude merely to the numerical loſs of population, though this is a thing in itſelf ſufficiently affecting. It is the particular character of the people who are thus expatriated, and the manner in which this takes place, that makes the matter appear to me moſt affecting. A brave and robuſt race of men, who have poſſeſſed and defended theſe mountains from time immemorial,—whoſe hearts burn with the moſt ethuſiaſtic loyalty,—whoſe candour, hoſpitality, good ſenſe, and ſtrict morality, in theſe degenerate times, exceed every encomium, and who are daily giving proofs of their heroiſm that challenge the applauſe of the world:—theſe men are driven from their dearly beloved native mountains, and are compelled to ſeek a home on diſtant, perhaps on hoſtile ſhores, at a time when the chief want that our country acknowledges is that of a ſufficient number of ſuch brave ſons to meet its foes. And all this is done, in order to make room for a few ſolitary ſtrangers, who bring themſelves under obligations to pay to their landlord a nominally higher rent for the ſoil, which the changing circumſtances of the country muſt enable them to diſcharge; otherwiſe, from their magnitude,

magnitude, these engagements must remain unfulfilled. To these individuals, hundreds of families, with claims on their landlord, which, to the ear of equity and humanity, would appear irresistible, are, by that landlord, for the sake of a petty apparent pecuniary advantage, obliged to give way. Yet this advantage, whether real or imaginary, is the only benefit that either the landlord or the country can possibly receive, for the inestimable and unascertained sacrifices that are thus made. We read with horror of the tyranny of William Rufus, who depopulated a county for selfish purposes, in days of darkness and cruelty; but, what is this to the crime of depopulating ten counties, in an age of high civilization, under every aggravating circumstance, and depriving the kingdom of those stamina which constitute its greatness?

I know, that the old system of farming in the Highlands was injurious to the landlord as well as to the tenant, and that the Highlanders were not formerly prone to change their habits; but I am also satisfied that the old system was not only capable of amelioration, and the Highlander as much qualified to reform his habits as any other man, in so far as they were really bad; but that the system formerly established, when ameliorated, and the Highlander, when informed and disciplined, are the only means by which the Highlands can ever be made useful to the proprietors and to the country at large; and that the position in which these were formerly placed, was that which prepared all parties best for the exigencies arising from the changing circumstances of the country.

There can, I think, be no doubt, but that some new change in the appropriation of lands in the Highlands will soon take place. The quantity of sheep and cattle that can be managed with care and with advantage by one farmer and his retainers, generally natives of a more genial soil, begins now to appear much smaller than calculators expected. Besides this, the advantage of joining the culture of potatoes, turnips and other roots, to the breeding system, and the opportunities which many improveable, but now neglected spots, afford of doing this, with a profitable rotation of peas, oats, barley and grass, are now become more manifest, and will tend still more to diminish the size of farms, and also to make a considerable addition of hands necessary for the country, provided, however, that the course of improvement is not already arrested. When the Highlanders have been expelled, whence will this want of hands be supplied? Will Lowlanders, or Irishmen, leave easy and productive employments in a flourishing country suited to their habits, and travel over some hundred miles of rude districts for work, where they must submit to hardships and

and privations that are intolerable to them. Would they do all this for the ſcanty recompenſe that the Highlander would accept of for his labour? Would they, after all, be ſufficiently robuſt for the hardſhips that behoved to be impoſed on them? Such expectations as theſe are altogether chimerical. Either there muſt be no further improvement in the Highlands, after the ancient race have left it, or a vaſt expenſe muſt be incurred by the landlord, before theſe improvements can be effected, in preparing accommodations and conveniences for his expected aſſiſtants. Theſe expenſes would ſoon be found to exceed the whole amount of that *bonus* which he had received from his new incomer; and it might probably happen, after a variety of experiments begun and reiterated, and a great deal of expenſe, that the preſence of the Highlander alone could accompliſh his object.

If this ſtatement is juſt, and for my part I do not ſee how it can be diſputed, it follows, that the landlord, by thus deſerting his brave countrymen, has conducted himſelf not only upon inhumane and contracted, but upon imprudent and erroneous principles.

I know it is ſuppoſed that the natives will ſtill be retained in different parts of the Highlands, in ſufficient numbers to ſupply hands as faſt as improvements in agriculture can take them up. Without diſputing altogether the foundation of this oblique policy, which admits ſo far the impropriety of its own plans, and implies alſo an admiſſion that the progreſs of improvement muſt now be much retarded, I would juſt remark, that its advantages muſt not be overrated. From what we now know of the diſpoſitions of all deſcriptions of tradespeople and labourers, we muſt lay our account with this,—that a competition amongſt employers for a ſupply of hands, not only will raiſe wages to the higheſt pitch, but will actually prevent coarſe and diſagreeable work from being duly executed. That reſpectful deference to a ſuperior, and that *amor patriæ* which has effected apparent impoſſibilities, are not to be purchaſed with money or indulgence.

It muſt be acknowledged, that the employment which the Highlander receives at preſent in the formation of the Caledonian Canal, leſſens, in a conſiderable degree, the amount of his hardſhips. The numerous public and private operations ſuited to his habits, that are going forward in the ſouth country, do the ſame thing. Theſe all give bread and employment to the induſtrious, while the army and navy are open to the diſſolute: by theſe means, too, the Highlander is drilled into the common hackneyed habits of induſtry, and made a ſyſtematic as well as an expert workman. This, however, is the whole amount of the

advantage

advantage obtained; and it is very limited in its effects. The Highlander, expatriated, sinks in his spirits; and soon, often too soon, sinks also in his morals and principles. Society, in after ages, may in vain seek for those heroic qualities which at one time filled every cabin in the Highlands.

Here I cannot help adverting to the Caledonian Canal. It is unquestionably an undertaking that does the highest honour to the nation; and I have no doubt, if God Almighty shall continue to bless this nation with prosperity, or in case it should be his will that we should be involved in a war with Russia and the Northern Powers, this canal will be found to be of the highest advantage to the country,—provided however, that the undertaking, with all its appendages, are absolutely completed. If these are left imperfect in any respect, it will afford a striking proof of the feebleness of our public spirit. There are so many wealthy and highly respectable men concerned in the management of it, that I hope there is little danger of any such misfortune.

I sincerely wish the completion of the Crinan Canal were adopted as a part of this canal project. The Crinan Canal will, to a certainty, become an object of importance, as soon as the Caledonian Canal is finished. And although it may not come up to the expectations that it at first raised, I am satisfied, that as soon as the Caledonian canal shall be set agoing, and certain improvements already begun in that quarter are completed, it would immediately pay much more than the interest of the money requisite for its completion.

I fear however, that, in a local point of view, even the Caledonian canal will scarcely produce the advantages that are expected to result from it. It will, no doubt, animate the industry of the country, in places contiguous to its line; but it will not of itself create a trade, or furnish the means of supporting one; it will not, I think, prevent the Highlander from emigrating, as things stand at present. If the Highlander were settled in any small farm, or petty business, or had some small property, he might invest his savings in them; but as his mind has a different bias from that of another labourer, I apprehend that his savings would go to a fund destined to transport himself to America, and that his present employment will inure and reconcile him to that kind of work which is so useful and necessary in America.

These operations have effected one very important object; they have exhibited the character of the Highlander, as a man of sheer industry, and they have furnished sufficient proofs that he is neither necessarily lazy, nor unable to suit himself to the circumstances that his lot prescribes. His landlords may now be satisfied,

fied, that if they had frankly given him what the Irish landholders long since gave to their mutinous vassals,—a favourable and a long lease of a farm of a small extent; he would long since have introduced into his little possession the various improvements that he could pick up in the course of his peregrinations, in so far as they suited his own farm; and have levied, by his industry in other quarters, the means of effecting his improvements; and, in all probability, have been able to make such offers to the landlord for the lease of other property, as would have exceeded his competitors. Upon such subjects, however, I shall not dwell any longer. My object being merely to point out the means that, in the present circumstances of the Highlands, are most likely to restore it to that degree of prosperity and consequence, which in the usual course of national improvement, might, if the landlord had acted upon liberal principles with regard to his tenants, have by this time pervaded the country.

If it is intended that the Highlanders should be preserved for the use of their country, something much more effectual than any thing heretofore attempted, must be done. We know their character and their circumstances; we know also their peculiar value as these are connected together. Let us see whether we cannot preserve these advantages, and improve them by a plan suitable both to their circumstances and their character. A desire for a kind of personal independence; an ambition for a certain degree of respect and consequence, simple and natural, yet steady and becoming their sphere; attached not only to themselves individually, and to their families, but to their country, their situation and connexions:—these are feelings which predominate in the character of the Highlander. Although fond of acquiring money, laborious, patient and persevering in industry, and more capable of submitting to personal privations than any other man;—his operations are desultory; he is averse to that restraint which implies a total surrender of his faculties to the will of another; and he is apt to make more use of this freedom, than is consistent with the ordinary routine of labour. In fine, from a careful examination of the character, circumstances and habits of the Highlander, I am satisfied that his proper sphere is either in that of agriculture, or in some certain kind of work connected with that or with domestic industry.

Amidst the various ungrateful sensations which the unhappy situation of the Highlands impressed on my mind, one strong ray of pleasure and of hope darted across it, when I saw Mr Fraser's improvements in the woollen manufactory at Inverness, and a kindred spirit displaying itself in different parts of the country, resembling

resembling in embryo the vast manufactures of Yorkshire. Machines are set agoing for preparing wool for the spinner; processes for conducting domestic spinning on a large scale are instituted and displayed; woollen stuffs in all their stages of fabrication are bought up by dealers and finishers of goods. In fact, I saw the whole rudiments of a manufacture, by which a most advantageous organization of the Highlands might be constructed, excepting only some parts which presuppose a large acquired capital, and a fixed establishment of all the parts of the process.

The great plenty and cheapness of wool in the Highlands does not at present confer much benefit on the petty half-established manufactures of that country. The large capital, together with the complete establishment of every branch of the process of manufacturing from the raw to the finished article, and the perfect organization of artists and operatives at every department of these manufactures;—these, and their acquired preference at every market, give to the English manufacturer such a decided advantage over the Inverness-shire manufacturer, that the English can afford to come to the Scotch markets for wool, and give a higher price for it than the Scotch themselves can afford to do. But I am satisfied, from a comparison of this case with that of the cotton trade, and other circumstances of too minute a nature to mention, that if domestic woollen manufactures, such as those already noticed, with necessary machinery and facilities were fairly set agoing in the Highlands, so far would the English manufacturer be from attempting to take the Highland wool to England, that the Scotch would be able to meet him at his own markets.

I am thus sanguine with regard to the success of domestic woollen manufactures in the Highlands, because the advantages which the Inverness-shire manufacturer possesses are of the most radical kind. Such industry may be said to be that of all others which is peculiarly adapted to the Highlander. It infers a kind of independence which it habituates to very severe industry and application. It favours his desire of acquiring wealth by economy and parsimony; and it leaves a scope for desultory relaxation, for contrivance, and for a display of consequence and ability. And as a Highland family can live much more frugally than any other, so they can bring their industry to the market on lower terms than any other. The assistance derived from the progressive amelioration of their process by means of machinery and other instruments which they would be able successively to purchase, would stimulate their utmost exertions. The latitude of either extending one branch, or joining collateral branches of the manufacture

manufacture with it, would give scope to the different geniuses and inclinations of the same family; while the gradual advancement of their wealth and respectability would keep them in that sphere in society that befitted them. The sulphuric impregnations of the Ness, and the pure air and limpid streams of the Highlands are important advantages. But that advantage which of all others appears to me to be the most valuable, is this.—In Scotland, particularly in the north of it, we are accustomed to make all our fabrics of a quality really and truly equal to what we avouch them to be; whereas, the English, in their mutual competition for cheapness and for fineness, have fallen into the habit of deteriorating the intrinsic value of their stuffs. This is a matter that is soon discovered, and soon operates in favour of the steady dealer. It is perhaps chiefly on account of this, that the woollen cloth manufacture of Galashiels, and the woollen stocking manufactures of Hawick, have become so flourishing amidst several disadvantages. To similar causes, the preference and superior valuation given to Inverness cotton bagging, is owing. I may also add, that it was chiefly on account of a strict attention to this, that a brother of mine, Mr James Laurie, at Glasgow, not only made his own fortune, but led the way to that immense demand for Scotch muslins all over the German, Russian, and Turkish empires, that in effect doubled the trade of Glasgow. Indeed, in this particular I would like to find that all our Scotch manufacturers rested their claims for preference in the general market.

As Providence has, to a certain degree, prepared the way for the introduction of woollen manufactures and domestic industry, by the numerous petty establishments of this sort all over the Highlands; and as I consider these woollen and domestic manufactures to be the principal means for remedying the evils aforementioned,—that is, the expulsion of so many brave Highlanders from their farms, and the desolate condition of the Highlands; I shall proceed to state, with as much precision and brevity as I can, those remarks that I made regarding the method for accomplishing these ends, so as to comprehend the whole country in my plan. And as I consider the exertions of individuals, of great influence and extensive property, to be in reality more beneficial to a country than those that are made either by government or associations, inasmuch as the former, from the deep concern of the individual in the business, pervade every department of an undertaking from its commencement to its final issue, whereas the latter can only affect general objects, and may turn out to be useless if a spirit corresponding to them does not at the

same

same time pervade the country; so I would be understood as addressing myself to each individual landlord, as well as to the great body of northern proprietors, and as calling upon him to show an example, as well as to add his personal weight to the plan that I propose, even although his conduct should be singular. Being unprepared to give even the sketch of a plan, I must request, in all cases of difficulty, that a reference be made to the kindred establishments in the upper part of Yorkshire, the North of England, and South of Scotland; premising, however, that the views which I hold up of their applicability to the circumstances referred to, are so conformable to every advice I have been able to obtain, that I hope they will not be thrown aside on light grounds.

1*st*, As every mode of saving an outlay of capital, and of giving encouragement to an undertaker in these manufactures is proper, it would be incumbent on every landholder, on whose property any erections were to be made, to give the ground upon the most reasonable conditions;—to convert these into an annual feu-duty, without any other burden;—to lend as much upon the buildings as they can bear, in order to aid the undertaking;—to use his influence amongst his vassals and dependants, in every instance where this can be of service to the business;—in all public measures, as well as in all private transactions, to regard it, and to provide for its interests, in the same way as if the business were entirely his own;—in fine, to conduct himself in every respect, both with regard to any erection of machinery, and with regard to any establishment and organization that the plan may lead to, in matters wherein he is principally concerned, whether the main or immediate advantage of these erections and establishments be his own or that of any contiguous or rival proprietor, as he would, if some corn-mill, or highly necessary article for agriculture, were added to his district.

2*d*, As all people who have an interest in the North of Scotland, either as proprietors, men of business, or as having connexions that are such, must regard this extensive plan as laid in some measure under their care; and as many of them, and of people whose hearts are attached to so noble an undertaking, may have it in their power, directly or indirectly, to contribute to the plan, so these ought to consider it as incumbent on them to watch every opportunity for procuring to these undertakings even the most minute advantage; particularly, if it suits them, or any of their connexions, they ought to embark in, and devote themselves to this business; and whether they do this or not, they ought to gather information as to particulars for the benefit

benefit of it,—such as the best fabrics,—the best mode of finishing and delivering each species of goods,—the proper markets for all articles which the circumstances of Scotland enable it to produce upon peculiarly favourable terms,—and the best way of obtaining an equal footing in these markets; and, as far as they can, they ought also to furnish introductions and other means for carrying these informations into effect. It is also to be hoped and expected, that all who have opportunities of so doing, will contribute assistance in the process or improvement of the manufacturing information respecting these, and take a hearty interest in their success.

3*d*, To people in more independent circumstances, it may be necessary to suggest, that as long a credit as possible from the wool merchant; the establishment of banks, who will always discount freely, at short dates, to respectable, though petty manufacturers, and liberally, at more lengthened dates, to substantial and undubitable houses; the erection of cloth halls on the principle of those at Leeds, Huddersfield, &c.; the introduction and establishment of dependent, connected, and collateral branches of manufactures, or industry or commerce, are all circumstances highly necessary to the welfare of such establishments. It may be proper to suggest, that such things as these would afford the highest, and sometimes the most decisive advantages, in the establishment of any such plan as that proposed. Taking it for granted, that all concerned are ready to do their duty, every thing respecting these points may be easily learnt, and may also, of course, be effectually provided for. As a reference can at all times be made to the corresponding manufactures already established in the southern part of the country, I readily quit this part of the subject, and proceed to point out the manner in which I would apply these woollen manufactures to the improvement of the Highlands, and to the amelioration of the existing circumstances of the Highlanders. I take, as my special objects of regard, those Highlanders whom it may be presumed are industrious, and such as have families, all disposed to regular peaceful industry.

My propoſal is, that each landlord ſhould begin with remedying the injury that he does to the Highlander in expelling him from his farm, by granting to him, in perpetuity, a piece of ground ſufficient to raiſe all the vegetables that his family and a cow may require, not exceeding, however, an acre; and alſo a few acres of moor land, or ſome ſuch ground, that is barely improveable, and not very diſtant nor out of the way, upon condition of receiving

ceiving from him the amount of its rental by way of a feu-duty or perpetual ground-annual; but perfectly free of every other burden whatever, except thoſe which the government or community may afterwards lay upon it; and, beſides this, give him the uſe of ſome hovel or cottage, until the tenant build on his feudal property a houſe of his own. I have myſelf, everywhere all over the Highlands, ſeen ſuch a multitude of places capable of this appropriation, that I have no heſitation in ſaying, that there muſt be few eſtates wherein a ſufficient number of ſteadings for the above purpoſe cannot be found, without in any degree affecting the preſent mode of appropriating the Highlands. In all caſes where it could be done, I would give a breadth of perhaps 100 feet to a high road, and throw the whole extent of the feu behind; but in ſuch an irregular country as the Highlands, this can ſeldom be effected.

The improvement of a ſpot that was now abſolutely his own, would ſtimulate the induſtry of the Highlander and his family. They would be inceſſantly employed, either upon the property itſelf, or in labouring, in order to obtain means for bringing this ſpot into its higheſt uſe. And as they would, by their induſtry, and the aſſiſtance of friends, ſoon be able to rear a houſe on their own property, the landlord's rent would become ſecured without further trouble; every additional improvement would add to its ſecurity; and he might calculate upon its regular payment at all times.

Independent of the woollen trade, the caſual employment, and the common induſtry of a family, it appears to me, that any laborious man might continue to improve the ſoil of any of the above ſmall ſpots, ſo as to make it produce a variety of things that are at preſent conſidered as exotic,—ſeeds, ſeedlings, certain fruits, &c.; and where a family are thus domeſtically brought up to induſtry, I do not think that, in general, they would find much more difficulty in making the moor land produce graſs or ſome valuable crop, than they would in clearing the woods of America, even admitting that it was neceſſary to labour it inceſſantly with the ſpade, or cover it with a new ſurface or ſoil.

No ſooner, however, would this family embark in a domeſtic manufactory, than wealth would flow into their hands. The education of ſuch a family would leave no doubt as to their induſtry, while their main object would be, to perfect their manufacturing proceſs. Their ſpare time, and their relaxation, would be devoted to the ſpade and the hoe; a courſe of life that would correct the tendency of both occupations to injure the conſtitution and the mental vigour, and confirm their former good habits. Each improvement of the family ſpot would render it more dear to

them; and as they would, by their manufactures and other induſtry, levy contributions from the moſt diſtant countries for paying their rent, their ſubſiſtence and their improvements, the petty feudal property would reſemble a mine which produced to its country wealth, labour, and heroic bravery, and alſo that beauty and pleaſure which rural improvement affords.

Thus, not only would the Highlander be provided for—his deſire of emigration be extinguiſhed—his *amor patriæ* be kept in its full glow,—but he and his family would be educated and retained in that ſituation, wherein their general virtues would be exerciſed and promoted, and the benefits reſulting from them ſecured to their country. Not only ſo, but he and his family would be advanced in ſociety, and in every acquirement, in a ratio at leaſt correſponding to that of the reſt of his countrymen. If any of his family acquired property in a diſtant quarter, the family ſpot would be benefited by it. If others of them choſe to remain at home, and take their chance of the growing improvement of the country, the landlord would find a new opportunity of adding to his perpetually ſecured revenue; or the family ſpot might afford a corner to them. Thus, while the whole favourite paſſions of a Highlander would find their proper objects of gratification, their country would be benefited by their development,—his deſire of reſpect and conſequence, independence, economy and induſtry,—his domeſtic and patriotic propenſities, would all unfold themſelves, and enable him to ſend out into ſociety his ſeveral ſhoots with habits and with ſpirits not unworthy of their ancient name.

I know that the induſtry and labour requiſite for creating a ſoil out of a deſert, and for raiſing exotic plants in a hyperborean region, might create much greater wealth, if diſplayed in ſome other quarters; but I know alſo, that this greater wealth, like the bubble formed upon the ſurface of the ocean, has no permanency. It muſt be realized in a ſolid form on the face of the country, before it is truly valuable; whereas, this unſightly maſs of unwieldy improvement, like our flinty rocks, will beat off theſe bubbles that daſh upon their ſides;—they will defend our liberties, and ſecure our independence. Let imagination ſurvey the improvement that this new ſyſtem would introduce into the Highlands. In place of a barren depopulated deſert, with only a few hinds, the deputies of ſome wealthy ſheep-dealer, tending a parcel of half-ſtarved goats and ſheep, we would ſee the grand romantic ſcenery of the Highlands, at every little interval, enlivened with a ſcenery, which, from contraſt, would appear paradiſiacal, and teeming with a briſk and happy race of patriots, who were employed in active and productive induſtry. In place of expelling our heroes from their ancient

cient hills, and conſigning them indiſcriminately to ſituations, where wickedneſs, diſeaſe and degradation await them, we would preſerve them to their country virtuous and happy. For my own part, ſo fully ſatisfied am I, that this mode of allotting portions of feudal property to the Highlander, would, in a very ſhort time, produce theſe effects, and put him into circumſtances that would enable him, by his induſtry, to lay the reſt of the kingdom under a gentle kind of neceſſity to furniſh him with means to improve the mountains of Scotland,—and alſo, that theſe domeſtic woollen manufactures are the moſt important means for enabling him ſo to do; that I look upon it as a neceſſary conſequence, that if the landlord were frankly to accord them this feudal property under the moſt favourable circumſtances that he poſſibly could, and to take a full intereſt in the eſtabliſhment of the woollen manufactures, that, in a very ſhort ſpace of time, the whole Highlands would be filled with theſe eſtabliſhments, organized ſo as to inſure their ſupport and continuance, and replete with the wealth and improvements that would everywhere flow from them; ſo as to preſent to the mind of a ſtranger the ſenſations of a peculiar paradiſe, and be at leaſt one hundred times more valuable than it is at preſent; every former ſpecies of induſtry,—the linen manufactory,—the fiſheries, &c. being, as a matter of courſe, advanced and increaſed. If I were a great Highland proprietor, ſooner than allow my ſcheme to be retarded, I would begin with laying off my pleaſure ground for theſe petty feudal ſettlements, and unheſitatingly conſign my parks and policies for their ſelect morſels of ground. I would, indeed, by ſuch conduct, incumber my heirs with an expenſe and a trouble that might have been avoided; I would furniſh them with a great field for diſplaying their wealth, and exhibiting their taſte in creating new policies and encloſure grounds; but, on the other hand, I would leave them an eſtate *ſecured*, *bleſſed*, and *proſperous*.

To the landlord, this ſyſtem would preſent certain ſingular advantages. It would not only repair the evils he muſt now encounter from depopulation,—ſupplying him with abundance of good hands for carrying on his agricultural improvements, all intereſted in his welfare,—with numerous competitors for his farms, all intereſted in improving them to the utmoſt, and placed in ſituations that enabled them to do this with the beſt effect; but alſo introduce a ſyſtem of improvement into his property,—create a ſource of ſupply for all the wants of his own domeſtic eſtabliſhment,—and provide for it a moſt invaluable ſecurity; no pledge being more valuable, than that eſtimation which a ſuperior and his contiguous vaſſals ſhould hold of his character, to a man thus fixt and eſtabliſhed; the influence which, as ſuperior, he

held over his feuholder, and as proprietor of so much contiguous property, which might in various regular shapes benefit the petty feuholder, being unquestionably secured, not merely upon the feuhold, but upon the feuholder and his dependants. This, in my opinion, is a kind of superiority that is extremely desireable, and as much as any superior could ever have an interest in exercising, whatever his deputies might desire to have; it is indeed as much as any good man can wish to possess over another; and, in my opinion, the feuholder would find his petty property more secure under the guardianship of a powerful superior thus situated, than if it was a freehold. I once conferred with a Highland freeholder, of great property, who had in some measure realized these happy visions to his imagination; and sorry I am to say, that although he was very old, and had no lawful children, he fell to devise one expedient after another in order to curtail the advantages of his poor vassal, and to bring the whole fruits of his industry into the hands of his family, in some seventy, or one hundred years hence. He could not reconcile his mind to the idea of coming frankly forward, and giving, in a complete and manly manner, the full advantages requisite. Such people ought to know, that the object to be desired cannot be obtained by any thing short of the terms that I have prescribed; that if it is obtained, it will ameliorate their property ten times more than any other deviseable mode, and make the whole Highlands at least one hundred times more valuable than they are at present; and that if it is not obtained, their whole property must fall in price. The difficulty of parting with select spots of ground, may in part be obviated by laying down a general plan; but this, and the inconvenience of collecting small rents, and having so many petty retainers, together with the trouble attending the general management, must be obviated by a frank and candid deportment. This will easily be accompanied, where necessary, with cheerfulness, from the reflection of the merit and benefits that result therefrom.

I think I can appeal to yourself, who have seen numerous townships, where cottages were crumbling away, and tracts of highly valuable ground negligently mixed with moor land pastures, wherein thousands of people, without any hardship to the sheep-farming system, might have been accommodated in the very way that I prescribe. The only want is the means for drawing a constant supply of wealth from other quarters. This can be done by domestic industry; and domestic industry would be supplied, if the woollen manufactory were established and organized. And as I propose to complete this bond of union and prosperity to the Highlands, without in any way traversing, or interrupting

interrupting or retarding the linen manufactory, the fisheries, or any kind of agricultural or local improvement, I shall next advert to the capital necessary for the proposed object, and to the markets that would be required for the consumption of its productions.

When I had discovered the burdensome and prolix process by which the capitals of the manufacturers of linen, osnaburg, &c. were returned to the country, I at first imagined that it was overburdened with capital. Immense piles of building, occupying a considerable extent of valuable ground, and inferring an expense out of all proportion to the value of the article produced, are necessary before the work can be set a-going. Vessels, generally in ballast, are sent to the Baltic, with cash, for the purpose of bringing home the raw material. By the bulk of the article, in proportion to its value, and the operose process of manufacturing it, money continues to be sunk in the business at no ordinary rate; and when the finished goods are obtained, they are sent southwards, to a commission-house, who may be a considerable time in procuring a merchant. At last a foreign market is obtained, and thirteen months credit given to the purchaser, who pockets all the bounties that Government has provided for the encouragement of this manufacture. A series of investment of capital, in a business so little adapted for defraying its expense as this linen manufactory is, is not perhaps easily to be found. I have not the smallest desire to interrupt its operations, because I know that it augments the prosperity of the counties in which it is established, and because, whenever a manufactory is so completely established as this is, a variety of divisions and subdivisions of every department of industry makes the comparative advance of capital, which falls upon each individual, trifling. But I cannot avoid comparing it with the woollen manufactory. In it the raw material is lying amongst our hands, and can easily be obtained at a reasonable credit; the process of manufacturing is comparatively cheap and simple; and the chief part of the value of the manufactured article is constituted of domestic labour that would otherwise be lost, and which, therefore, is seldom paid off, until the article be in a marketable or consumable condition. During the whole process, bills at discountable dates can be put in such circulation as to relieve the manufacturer from a great part of the advance; while every accommodation and facility that can attend any manufacture is also provided, by its contiguity to the manufactures of the South. Not only has it an almost unbounded market at home, but provision is made for its special interest in every commercial treaty that is made by Great Britain with foreign powers. In Portugal, Turkey, Rus-

sia, America, as well as in the East and West Indies, its market is established, and a consumption of its productions rendered certain; so much so, that it is calculated that the amount of finished goods which it produces is not less than 14 millions Sterling *per annum*. I believe I am correct, though not quite certain.

The fact is, that in Scotland we have hitherto been asleep as to our local interest. It is only when we have been drawn forward by some extraordinary effort, either of the Government or of public-spirited individuals, that we have exhibited our character or our peculiar advantages. But we may safely infer, from our patience and perseverance in the linen trade, that whenever we shall be aroused, and experience the advantages of the woollen manufactory, we will cling to it with all that ardour which its importance deserves. It is by far the most advantageous trade carried on by Great Britain, whether we consider its amount, or the benefits which every county wherein it is established have actually derived from it. It is one to which our Highlands are peculiarly adapted. Were but the tithe of the trade carried on in Yorkshire transplanted to the Highlands, that county could no longer boast that it contained twice the amount of the wealth of Scotland. I should even hope, that our Highlands and Islands might themselves vie with it both in riches and population, and even in beauty. I have heard some respectable old landholders near Glasgow say, that many hills which now produce good crops of wheat, were once no better than the Highland mountains; and I am persuaded, that neither the climate nor soil would consign one half of our Highland mountains to their sterile appearance, if industry and wealth were fairly planted in the midst of them.

When lately in Inverness, I mentioned to Mr Fraser, that I imagined the surest way of establishing his manufactures, would be to find out some leading article suited to some foreign market, availing himself always, however, of transient business as it occurred; This not only induces a class of purchasers to give us a decided preference; but it creates improvements and peculiar advantages to the manufacturer. The Russian and Baltic trade, where so much of our money goes, seem to present themselves; and although, perhaps, some loss might at first happen, it would be a matter of prudence to risk a variety of little adventures, in order to ascertain the fabrics that suited that trade. But it appears to me, that the Turkish and Portuguese trades would suit our Scotch manufactures best. Goods, of a fabric betwixt woollen and worsted, of a good texture, but thin, are just the kind that our Scotch wool could best manufacture; and these are the principal articles in demand there, particularly in the Levant trade. The American and

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Weſt India markets are generally glutted: but, even there, our long-ells and camblets are preferable to the Engliſh. It is very certain, that the Eaſt India Company buy a conſiderable quantity of cloth, that the Scotch manufactures might produce. But if any quantity of orders, of ſome general deſcription, could be obtained from any quarter whatever, ſo as to ſet the Scotch manufactures fairly agoing, we might be at eaſe with regard to their future fate. A complete beginning, like the firſt impetus which our monopoly of the American trade gave to the induſtry of Great Britain, would eſtabliſh theſe manufactures beyond the danger of any common contingency, and enable thoſe concerned in them to traverſe every acceſſible market without difficulty. Individuals might be unfortunate in buſineſs; bankruptcies might ſucceed each other in quick rotation: but the eſtabliſhment of machinery and of commercial objects; the organization of every deſcription of work and workmen, and the improvements already ſet agoing in the country, would remain: new demands would ſucceed, after every interruption of induſtry. The whole would invite freſh capitaliſts or new adventurers from every quarter; and the machine of commerce, invigorated from its ſhort ceſſation, would move with redoubled celerity and effect. In Glaſgow, ſome of their bankruptcies have actually done general good, by dividing the monopolized parts of commerce amongſt the community, and diffuſing its benefits. For it is not the accumulation of wealth, but its general circulation and diffuſion, by means of induſtry, that benefits ſociety.

It is much to be regretted, that the port of London, and one or two aſſociations of merchants, ſhould monopolize all the advantages that the country can derive from its trade to the Eaſt Indies, North-weſt America, &c. If theſe trades were thrown open, and every individual, as well as every port of the United kingdoms, were allowed to partake of them, I am ſatisfied, that the real wealth of the kingdom, and perhaps its inhabitants, might ſoon be doubled in amount. It is a very unfair way of calculating the advantages of a trade, to ſtate its amount, and to require a counter-ſtatement of the amount to which it could be raiſed, by throwing it open. We want the *data* for this counter-ſtatement, becauſe we do not know the amount to which our trade, to unexplored markets, could be raiſed; and we want the means of appreciating the induſtry that we could raiſe upon the objects that we could procure from thence. Theſe, in all probability, however, would double the whole amount of the preſent trade; which alſo might be made much more productive of real wealth to the country, than it really is at preſent. One thing we know aſſuredly;—the Americans reckon this their principal trade, both for profit and for national advantage. They ſend out a petty cargo, chiefly drawn from the

manufactures of Great Britain, and ſtores for a voyage; and, at the diſtance of two years, generally receive returns of 200 or 300 *per cent.* of the outfit. And it is well known, that beſides the advantage which a nearer approximation to the ſeat of this trade, and our eſtabliſhed maritime ſuperiority and ſupremacy in theſe parts, give us, that the materials for every ſuch voyage, and the price of our labour, are leſs, by at leaſt one half, than the Americans can ſupply with. Beſides this, the path of commerce in the Pacific and Eaſtern ocean is every where productive of mines of wealth, that have not yet been touched upon. Under the London monopoly, theſe advantages are never thought of. Nine-tenths of Britiſh ſubjects think only of the Eaſt India trade as a method for ſupplying them with tea, &c. for which they find themſelves drained of money: but every other effect produced by it, is unknown and unfelt.

It has been, I believe, aſcertained, that the commerce that is forced into the Thames, not only has ceaſed to add to the proſperity of the river, and induced an expenſe of near 10 *per cent.* on all foreign buſineſs that is tranſacted there, including commiſſion, dues, ſpoliage, &c. but that it even diverts the principal advantage of trade—the circulation of wealth—by the excitement of appendant and connected induſtry into foreign, and even into hoſtile countries. From the example that America holds up to our government, we ſhould hope for a different train of proceeding.

I am led to believe, from information and calculation, that the diſtrict of Scotland, to the north of the Tay, conſumes annually above 500,000l. of Eaſt India commodities, all which being caſh articles, are paid within four months after delivery. If this money were ſent by Inverneſs to the Eaſt Indies for its own commodities, the capital would be returned to them in a ſhorter time than their linen trade returns it. But as there is always, perhaps, a greater ſum due by India to gentlemen having an intereſt within that diſtrict than this ſum; and as it may be preſumed, that thoſe having connexions in India, may avail themſelves of thoſe connexions, ſo as to have the uſe of that capital in China, which is due to them in India; and, alſo, as it may be preſumed, that ſuch gentlemen might ſee it to be their intereſt and their duty to embark in the trade of ſupplying Inverneſs directly with its articles for conſumption from its own port; we might hope that at leaſt this amount of trade would be created in favour of the port of Inverneſs. The canal furniſhing it with an avenue, either by the north, weſt, or eaſt; ſhe would poſſeſs not only the advantage of carrying on her trade in all weathers, and in all times, in war and in peace, but alſo have a chance of ſupplying other diſtricts from that ſource which ſhe would thus be enabled to create. Adding to this, the chance

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of diſpoſing of her manufactures, and of embarking in new trades, or thoſe akin to that of the Americans; and the great *momentum* which all the appendant, connected, and conſequent branches of induſtry, would receive from theſe trades; I ſay, taking in theſe chances into the progreſſion of domeſtic induſtry already ſet agoing, or about to be eſtabliſhed, in the Highlands; I think there is ſuch a proſpect of advantage held up to the Northern proprietors, as calls for their moſt particular attention.

If to all theſe advantages you add the inducement which the holding of the wealth at preſent abſorbed in London, will receive, to migrate over the face of the country; not only from the peculiar advantages of the port of Inverneſs, but from the improved ſtate of the country connected with it, and the objects prepared for giving an advantageous employment to their capital; you cannot ſuppoſe that the begun improvements would not receive their full completion. Eſtabliſhments and organizations made in Scotland, are not eaſily removed: the conſequence might be, that Inverneſs, like Glaſgow and Edinburgh, might not only receive back many of her expatriated and adventurous ſons, but might draw to herſelf foreigners. Ports, much more unpromiſing, have accompliſhed this. The interior of the country would in conſequence receive a ſpecies of improvement of another ſort. The Highlands and Iſlands would be improved, leſs from motives of advantage, than from taſte and luxury; and poſſeſſing, as they do, incitements of no ordinary nature, might vie in beauty with the richeſt parts of the kingdom. A ſtrong, ardent imagination, might carry theſe views much farther: but I content myſelf with ſober and moderate calculations; and mean to put no extraordinary weight on that abſolute controul of the commerce of the world which this country enjoys. I ſhall now conclude with ſome general reflections upon the benefits to be derived from realizing all theſe views.

We see that the income tax is a matter of the highest importance to the government: what an addition to its amount would these improvements occasion! We find ourselves tantalized about the revenues brought from India: would not such improvements increase the revenues of our landholders, more than three times the whole amount of that revenue? We are obliged to permit our best fellow subjects to emigrate, when they might, by staying at home, double their numbers every second generation: how praiseworthy would it be, not only to retain this mine of unappreciated value, but to raise their condition in society, to give honest magnanimity and patriotism a field to expand itself in, and to prepare objects for the exercise of those heroic qualities! We are at present under apprehensions lest these bulwarks of our island,

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its lofty mountains, should become the seat of desolation: would it not be a noble achievement to convert them into a kind of paradise? In case of a war with Russia, or the Northern Powers, in concert with our other enemies, those parts of the Highlands, which are the most exposed part of our territory to the inroads of these Northern hordes, would be possessed by a race of men, who would present such a front to their invaders, that Britain, without dismay, might attend to her other concerns, and leave these bulwarks to the charge of her robust sons. Are any exertions too great, to acquire such advantages?—are any sacrifices too considerable, to secure them?

Thus, not only that supreme regard which all men ought to display towards society, to their brethren as christians, and to their fellow-subjects, and their common country as Britons, is interested in this matter. But the power, the energy, the resources of the country are at stake. The claims which their family, and their immediate dependants have upon the landed interest, call upon them, with peculiar earnestness, to attend to such important concerns. Will the noblemen and gentlemen of the North of Scotland, be deaf to such claims? Will the descendants of those warriors, who have withstood the career of all the great conquerors that the world has hitherto produced, be afraid to urge the rights of their country, when assailed by the Aldermen of London? No! the present danger of the country; the unjust presumption of these monopolists; the honour and dignity of christian fathers and masters; and the deep distress and misery of their unhappy countrymen, call loudly and effectually for their highest, their regular, yet firm, exertions in their behalf; and, it is hoped, they shall no longer call in vain.

To conclude, it is time for the Government of this country to give us other proofs of our greatness, besides the extent of our burdens, and the splendour of our achievements,—the proofs that arise from universal prosperity. It is time too for the Highland Chieftains to give their dependants real proofs of their regard, and to augment the value of their properties, by magnanimous and meritorious methods alone. This they can achieve, by *retaining those vassals, which the feudal system gave them, according to the pure principles of the mercantile system, tempered as it is by humanity, and enlightened by Christianity.* And, by other means than these, *they never can achieve their purpose.* By these means alone, they will become independent of the bounty of Parliament, and find themselves placed in circumstances that shall enable them to ground their claims on a more honourable basis.—I remain, Sir, with great respect, your most obedient servant,

DAVID LAWRIE.

On Board the Stranger, 27th January, 1807.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Plan for removing Tithes, and encouraging Agricultural Improvements.

SIR,

As I have long considered the tithes in England to be by far the most formidable and oppressive obstacle to the progress of improved cultivation in that part of the island, I have often been led to think, whether no plan could be adopted to circumscribe the effect of their baneful operation: and it occurs to me, that by means of an association, a partial relief might be effected. From my limited knowledge of the subject of tithes, I do not pretend to determine whether my idea could be carried into effect. This must be determined by those more intimately acquainted with the subject. But the idea is easily stated:—if it does any good, well; if not, I have the consolation of thinking it can do no harm. All will agree, that, if practicable, England contains abundance of men of spirit and liberality to give it a fair trial.

My plan, then, would be, to form a society or association of men of capital, who are actuated by the patriotic desire of encouraging agricultural improvement, with a joint stock to be subscribed by them, and applied in the purchase of tithes that come to the market, for the purpose of reselling them to the proprietors of the lands from which they are exigible. It is well known that property of this description, to a very considerable amount, is occasionally exposed to sale; and, as the proprietor of the land has a much greater inducement to purchase the tithes affecting it, than any third party can have, the only reason that can be assigned for his not so purchasing, in every instance, is, that the tithes are sold in such lots as to put it out of his power: for it appears, to me at least, that a proprietor of land would not lose any opportunity of freeing his land from such a detestable servitude, if it came at all within the limits of his power. I would therefore propose, that the funds of the society should be directed to the purchase of all tithes which are sold to any other than the proprietor of the ground from which they arise, provided the purchase can be made on reasonable terms: and this should be done with the declared intention of reselling these tithes in lots, exactly corresponding to the division of the landed property, and to the proprietors of such lands only, if they chose to purchase; by which transaction the tithes would be completely neutralized and done away. For the reason above mentioned, it may be supposed that no proprietor would hesitate to purchase, when such

a fair opportunity presented itself; and therefore the society would run little risk of having the purchase long on their hands: or if, in some cases, it should happen otherwise, they would still hold property equal in value to their outlay; which would produce an adequate yearly return, till disposed of.

Many regulations would, of course, be necessary, in the management of such a concern, which it is needless to notice here; and, no doubt, many objections occur: but the question is, whether these could be surmounted. It seems probable, that if the purchases were prudently managed, no loss, but rather profit, would accrue from them: however, the expense and difficulty of management might be considerable; but these would not be greater than those at present borne by other societies for objects of less importance. A committee of a few active gentlemen, zealous for their country's good, could, without much trouble to themselves, superintend the business of the society. Nay, a few spirited gentlemen in a county, or even an individual, imbued with the true spirit of improvement, and with a moderate command of capital, might do all the good that could be done in this way within their own county or district: and, as the necessary local information would be much more in their power than that of a more extensive society, I am not sure but county societies would be the preferable plan of effecting the object in view.

It must readily occur, that this scheme, though completely successful, would only produce a partial and limited relief; for it can only apply to such tithes as are private property; and I would mention it, only as a partial alleviation, till the great and radical cure of a general conversion can be effected. This, or worse, must come at last:—indeed, it is astonishing that such an illegal and impolitic imposition should have remained till now, against both the reason and experience of the present age. Of the absurdity and mischief of any tax upon industry, and more particularly of this tax upon agricultural industry, there can be but one opinion. Indeed, I should doubt the reason of any man who should either support the present system of tithes, or oppose their conversion. All parties are interested in their conversion. The proprietor of land would be infinitely benefited. The proprietor of tithes would suffer no injury, if he received in exchange a full equivalent. But the country would gain most; for the produce of grain would, in consequence, increase one fifth, at least, in a few years. How, then, has our Government permitted this bane of agriculture—this bar to national prosperity, to exist so long? It may be accounted for on the following supposition. Our Government may be of opinion, that there is more misery than happiness in human life. The first consequence of the abo-

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lition of tithes, would be an increase of some millions in the population of the island of Great Britain. But there being more misery than happiness in life, the increase of population would only produce a proportional increase of the sum total, or rather of the nett balance of human misery. If Government act upon this system, it must be confessed, that each successive administation adheres to its benevolent principle with the most determined philanthropy.

Yet, what an accession of power and security, would not such an increased population bring to the British empire at this momentous crisis: how would it strengthen our army, our navy, the security of our constitution at home, and of our colonies abroad? The mind sickens to think that resources so ample, so much within our power, should be sacrificed on the altar of state policy, or the political influence of any party. I am, &c.

R. M.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Diseases of Sheep.

SIR,

I BEG leave to recommend to your favourable regard the following memoir, which, I think, deserves the notice of all who have turned their attention to the subject of sheep, whether as a branch of natural history, or as a source of profit and gain to the farmer. I translated it, because, coming originally from a man, whose opinions must be allowed to have great weight in such matters, it might, I conceived, contribute to throw some light upon a subject which demands attention, and which, from two recent publications, appears to be engaging the attention of that patriotic institution, the Highland Society. Scotland is now rapidly advancing in agricultural celebrity; and the free promulgation of enlightened opinions appears, I think, to have been the harbinger of that system of improvement which is becoming daily more visible throughout this interesting country.

The following Essay is entirely practical. M. Daubenton, the author, besides being a celebrated naturalist (successor to Buffon), spent twelve or fourteen years in a sheep country in France, for the purpose of studying more minutely every thing relating to their frame, nature and propensities. It will be found, on perusal, that some of the diseases treated of are analogous to those in this country; consequently, the cures he mentions, must also be of use here; and though others have not yet appeared in Britain, the introduction of foreign breeds may introduce foreign diseases. This we can neither guard too well against, nor be too well prepared for, when it happens.

Should

Should you agree with me in regarding this as an useful production, the insertion of it in your Magazine, will oblige, your most obedient servant,

J. A.

University of Edinburgh, 21. *May*, 1807.

On the suitable Remedies for the most prevalent Diseases of Sheep, read at a Meeting of the Royal Medical Society of Paris. By Professor Daubenton.

In our climate, sheep are not affected by any intemperature of the air, but only by the violent heat of the sun; their wool defends them from the most intense cold. For ten years past, in the northern extremity of Burgundy, I have had flocks exposed to the open air night and day throughout the year. The severe frosts of 1768, and of 1776, had no effect upon them, although the fluid of Rheaumur's thermometer descended to 14 degrees and a half, and to 18 degrees below zero. The heaviest and most long continued rains, the snow with which they were covered, and which served them for their only drink, the icicles formed upon their wool, and which remained suspended from it, caused no disease whatever; but the heat of the sun has been productive of many deaths in the fields; and many more would have fallen victims to it, had not proper precautions been speedily observed.

The disease in sheep, caused by excessive heat, has been denoted by an analogous name, viz. the *Heat*. Those most free in blood, best fed, and most robust, are most frequently subject to this disease of heat. Those attacked by it gasp for breath, foam at the mouth, and bleed at the nose; the eyeball becomes red, the animal droops its head, staggers, and soon falls dead. After death, the eyes, the lower part of the cheeks, the nether jaw, the gorge, the neck, the inside of the gullet and of the nose, are of a mixed colour of red, and somewhat blackish. On opening the animal, we find the blood-vessels swelled in all those parts just mentioned, and in the head. All these symptoms naturally lead us to have recourse to bloodletting, which speedily effects a cure, if administered in time. This remedy, then, is one most necessary for sheep in warm climates, in temperate climates like our own, and also in cold ones, where the sun is powerful in summer.

There is another remedy absolutely necessary to sheep in every country, and in every season; it is a remedy for the *itch*, to which they are more subject than to any other disease. Flocks grazing in pastures most suited to their species, and even to their kind,

kind, are not exempt from it. Sheep that are best fed, and most vigorous, are liable to it. When the fat humour of the grease grows rancid, it affects the skin, and gives it a diſpoſition to *itch*. If this disease is not stopt on the first appearance, it spoils the wool, and causes it to drop off. If the progress of the distemper be not arrested, the flesh becomes ulcerated, the bones rot, and the death of the animal ensues. A remedy for a disease so frequent, and so dangerous, is still more urgently necessary for sheep than bleeding, because they are oftener afflicted with the itch than with the disease of heat. To record the observations I have made, is the object of the present memoir.

Sheep are bled in different parts of the body, in the forehead, above and below the eyes, in the ear, in the jugular vein, the shoulder, the tail, below the ham, and in the foot.

Before treating of the different kinds of blood-letting, our subject leads us to make some reflections on the treatment of the diseases of sheep. The mode of treatment should be adapted to the proportion of strength in the animal, and to the knowledge possessed by the shepherd in reference to medicine and surgery. A ſheep attacked with a tedious diſeaſe has little ſtrength; in this caſe, the remedies adminiſtered muſt be nouriſhing rather than exhauſting. In accidental diſeaſes, which are ſpeedily cured, the ſheep loſes nothing of its ſtrength, if the remedy be an eaſy one, and ſpoils not the wool.

The bleeding of the ſheep muſt be performed quickly. The veſſel opened by the operation, muſt be ſo large as to give a ſufficient quantity of blood, and ſituated in a part of the body where there is no wool.

I think, that in moſt of the diſeaſes incident to ſheep, it is unneceſſary to ſelect that part of the body, where the bleeding may appear to be moſt favourable. The moſt ſkilful of the medical profeſſion are not agreed as to the different effects of bleeding in different parts of the human body, although they have much experience upon the ſubject. And what would ſhepherds do, with the feeble light afforded them, upon a ſubject far from being elucidated by reference to animals? It is better to diveſt them of a practice, in which they might commit groſs miſtakes, and which moſt frequently appears of no utility whatever to the ſheep.

But when a diſeaſe attacks many flocks, ſpreads from one diſtrict to another, and pervades contagiouſly many provinces, it is an object of prime importance, aud becomes a national affair. In ſuch unfortunate caſes, all the reſources of medicine are to be employed; and, amongſt others, thoſe of the different bleedings. The ableſt medical men ſhould endeavour to diſcover the cauſe and

and remedy of a diſorder, menacing the deſtruction of animals uſeful to every nation, to ſuch eſpecially who employ wool in the fineſt manufactures.

Keeping this in view, the Royal Medical Society has eſtabliſhed a correſpondence with ſhepherds for the purpoſe of inſtruction. Members of the Society are ready, in urgent caſes, to direct the ſhepherd in the management of his flocks. My obſervations on the bleeding of ſheep do not extend to rare and complicated caſes. I think, that, in ordinary ones, it is ſufficient that the ſhepherd know how to bleed on one particular part of the body of the ſheep, ſuitable at once as to the ſize of the vein, the facility of operation, and the preſervation of the wool. Having thus premiſed, I proceed to treat of the different bleedings made in various parts of the body of the ſheep.

The veins of the forehead are ſmall, conſequently, give but little blood, and are not ſenſible by the finger. Above and below the eye, or between the two eyes, bleeding is performed only upon the portion of the angular vein, which extends from the cavity of the eyebrow to the upper part of the cheek. Thus, although theſe three bleedings have three deſignations, they may be reduced to one alone, which is made in different parts of one portion of the angular vein, about an inch and a half in length. This bleeding gives ſufficient blood, becauſe the vein is large; but it is difficult to feel it with the finger, although ſwelled; conſequently the riſk is frequently run of miſſing the vein.

The veins of the temples being ſmall, cannot be made to ſwell by preſſure. In moſt kinds of ſheep, the temple is covered with wool; it is therefore difficult to bleed in that part thoſe which have horns. However, I have bled ſeveral in that way, though the blood oozed ſlowly out, and did not flow at all freely.

When blood is taken from the ears, it is by a wound; becauſe the veins are ſo ſmall, that many muſt be opened at once. An inciſion is made in the ear, and a blow under it is given, to cauſe the blood to flow. This is a bad plan; it ſhould be adopted only in the moſt urgent caſes, where it is impoſſible to act better.

Bleeding in the jugular vein, in the ſhoulder, or below the ham, is too difficult for moſt ſhepherds; and here one man alone cannot eaſily operate; beſides, bleeding in the neck or ſhoulder would ſpoil the wool.

On the tail of the ſheep two ſorts of bleedings are made; one on the part devoid of wool, the other at the extremity; the former gives but little blood. To draw blood from the end of the tail, the laſt falſe vertebra, at leaſt, muſt be cut off; this cannot be done with a lancet. The extremity of the tail is cut off; ſo that the veins and the arteries, with the bone, are ſliced; the fleſh is ſtripped up, and leaves the naked bone; a wound remains.

Sheep

Sheep are bled in different parts of the feet; but here only ſmall veins are to be found. Beſides, apprehenſions may reaſonably be entertained, that dirt may frequently intrude into the openings made by theſe bleedings, and thus cauſe inflammation, and collection of humours, which not only bring on lameneſs in the animal, but may extend into the hoofs. Bleeding in this part is alſo attended with inconvenience; it cannot eaſily be performed by one perſon.

I have diſcovered another method of bleeding ſheep, which appears to me preferable to all thoſe at preſent in uſe; becauſe it is not ſubject to any of the inconveniences above mentioned, and is more eaſily executed. This is done at the lower part of the cheek, at the ſpot where the root of the fourth cheek-tooth is ſituated, which is the thickeſt of all; its root is alſo the thickeſt. The ſpace which it occupies, is marked on the external ſurface of the bone of the upper jaw, by a tubercle ſufficiently prominent to be very ſenſible to the finger when the ſkin of the cheek is touched. This tubercle is a very certain index to the diſcovery of the angular vein which paſſes below. The vein extends from the under border of the jaw beneath, near its angle, to below the tubercle, which is ſituated at the root of the fourth cheek-tooth; further on, the vein bends, and extends to the cavity of the eyebrow.

To let blood in the cheek, the ſhepherd begins by placing an open lancet between his teeth; he then puts the ſheep between his legs, and ſqueezes it ſo as to hold it faſt; his left knee is rather more advanced than the right; he places his left hand under the head of the animal, and graſps the under jaw, ſo that his fingers are under the right ſide of that jaw, near its hinder extremity, in order to preſs the angular vein, which paſſes in that place, and to make it ſwell: The ſhepherd then touches, with the other hand, the right cheek of the ſheep, at the ſpot nearly equidiſtant from the eye and the mouth; he there finds the tubercle, which is to guide him; he can alſo feel the angular vein ſwelled below this tubercle; he then takes in his right hand the lancet which he holds in his mouth, and makes the inciſion from below upwards, half an inch in length, below the middle of the projection, which ſerves to guide him.

I do not exaggerate when I ſay, that by this method a blind perſon might bleed a ſheep; becauſe, with one of his fingers he feels the tubercle, which alone directs him in making the inciſion.

Bleeding in the cheek, then, is a method equally ſure and ſimple, ſince the ſituation of the veſſel cannot be miſtaken, whilſt it is ſufficiently large to furniſh a proper quantity of

blood; for it receives that of the veins of the forehead, of the eyes, the nose, the upper lip, &c. The blood is there retained by the hand of the shepherd, which serves as a ligature at the angle of the jaw. No risk is run of opening the artery; for I have always found some distance between it and the vein at the place of bleeding. One man is sufficient for the performance of this operation.

All these advantages have determined me to give the preference to this method of bleeding in the cheek, above all others; having made the proper comparisons in practice.

I have now recommended a method of bleeding sheep, more certain, and more easy, than those in present use. It remains for me to point out a remedy for the itch, preferable to those usually employed in this disease.

The itch in sheep makes continual progress; the longer it lasts, the more difficult it is to cure. The shepherd, then, should be extremely attentive to discover its earliest symptoms. He must keep a watchful eye over his flocks, and observe if any sheep scratches himself with his feet or his teeth, or if he rubs himself against the rack, against trees or walls, &c. If the wool is spotted with dirt on those parts of the body which the animal can reach with its feet; if there are tufts of wool pulled out of order, which the sheep has torn with his teeth or scratched with his feet, these signs indicate itchings caused by lice, by the itch, or some other distemper. The shepherd must carefully examine his sheep, by separating the wool in the parts affected, to see if there exist real symptoms of itch.

These are indicated by the skin feeling harder in the scabby parts than in the other parts of the body; it is covered with white scales, with crust, or small pimples, which are at first red and inflamed, and afterwards assume a white or green colour: all these symptoms are followed by an itching. But there is another sort of scab which does not create itching; this quickly spreads under the wool, and, instead of causing it to drop off, makes it turn red, and become stuffed with felt, as if it had been trampled upon.

When these symptoms have been observed, the remedy for this disease must be applied without delay. At the same time, if it is judged that it was caused by fatigue or a state of tenderness; if it has arisen from bad air, or the heat of the house; from want of proper nourishment, or from the naturally bad constitution of the sheep, the original cause of the evil must be removed, because it would stand in the way of the success of the remedy. If the itch proceed from some other disease, regard must be had to both at the same time.

When

When the disease is not inveterate, or ulcerated, it may be cured by topical, without internal remedies. In this disorder, many topical remedies have been employed: it would be tedious and useless to recount all in this memoir: I shall only here mention the principal.

The most customary are, the infusion of tobacco, oil of juniper, solution of green vitriol, of alum or of common salt; the flower of sulphur, grey ointment, &c. All these remedies may cure the itch, but each is attended with great inconvenience. The infusion of tobacco, the oil of juniper, and the solution of salts, do not agree with the state of the scabby skin; they cause its thickness, its dryness and hardness to increase and continue; it is thus hurtful to the growth and good qualities of the wool; besides, the tobacco, and particularly the oil of juniper, give to the wool red and blackish tints, which spoil it; sulphur gives it a bad smell, which remains in the fleece after shearing; the mercury in the grey ointment may give to the shepherd, and the sheep affected, a salivation, to remove which the application of internal remedies may be requisite; besides, to animals destined to be our food, no remedies should be administered which are at all likely to be productive of any bad effect.

After having tried upon my sheep all these remedies, and many more, I found it necessary to discover a better, which should be less expensive, and more easy in the application, communicating no bad quality either to the wool or to the flesh of the animal. A mixture of fat, or suet, with essential oil of turpentine, answered all these conditions. Fat is preferable to suet in winter, because it is more easily spread over the skin of the sheep; but the suet is better in summer, because it is not so soon melted by the heat. The composition is extremely simple.

Melt a pound of suet or of fat; take it off the fire, and mix into the suet, or fat, a fourth of oil of turpentine.

The ointment costs but little; it has no bad effect upon the wool; it softens the skin of the sheep, hardened by the itch, and cures the disease. It may be rendered more active by increasing the dose of oil of turpentine.

It is easy to use it without cutting the wool where the itch is, since it is sufficient to separate the tufts a little, in order to lay open the part affected; then the shepherd scratches the skin with the scratching knife, merely so as to raise the crust, and he applies the ointment, by spreading it over with his finger. Some adhere to the bad custom of scratching the skin of the diseased sheep with a bit of brick, till it is on the point of bleeding; a small wound is thus made, which is an additional evil. I have

provided my shepherds with a single instrument, which is sufficient for all the operations they have to perform on sheep; it is a sort of incision knife, whose point has two edges, and serves as a lancet; the handle terminates in a blade of bone or ivory, which is a scratching knife.

Ellis, one of the best English authors who have written on the treatment of sheep, has given different recipes for the itch, wherein oil of turpentine is mixed with beer, or with a decoction of tobacco, soap, urine, brine, &c.; but I do not think the oil of turpentine has ever yet been employed in the manner in which it is in the ointment I propose, and so as to be suitable to every circumstance. The efficacy of this ointment is proved to me by long experience in my own flocks; I shall now mention only one of the most decisive proofs. A flock of rams and ewes were sent to my sheep-fold last winter, under the most unfavourable circumstances; they had to go two hundred leagues; the ewes were big, the season severe, and the ground covered with snow. As soon as I was informed of the journey, I wrote to stop the further advance of the flock; it was then fifty leagues from the fold; the ewes had dropped on the road; the lambs, and many of their dams, had died; both rams and ewes had lost almost the whole of their wool; they were emaciated, and covered with scab. A perfect cure was speedily effected by the application of the above mentioned ointment. At present they are in excellent condition.

This same flock is estimable for the excellent quality of its fleece. On it are founded my experiments concerning the amelioration of wool. To this, the perfect health of the ewes, and especially of the rams, is absolutely necessary; hence I resolved to inquire with ardour into the means of preserving, and of re-establishing it when disordered.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Salving Sheep.

SIR,

THOSE persons who possess a desire to diffuse knowledge, are generally very soon made sensible how difficult it is to give a wide range to the best and most simple discoveries. Ages have elapsed, from the first invention of those arts, without which, life would be deprived of most of its comforts, before they became generally useful, or before they had received improvements, without which the bare first discovery could confer little benefit upon mankind. So many examples must readily strike

strike those who in the least reflect on this, that it is not necessary to dwell upon the subject. The reasons why inventions of utility are so slow, even in our days, in coming into reputation, may without difficulty be accounted for. The multiplicity of speculators must of course often create deception; and repeated deception must impair confidence. Many lose the benefit of excellent discoveries, either from want of knowledge of the manner in which they should be applied, or of patience in following out those measures which are alone calculated to insure a successful issue. The rooted habits, and the unwillingness to be taught, which prevail so much in the world, may be stated as a great bar to the speedy diffusion of knowledge; and this diffusion of knowledge is not a little impeded by the selfish craft of those who, having found benefit from some useful discovery, resolve to monopolize the advantages, and, by crying down the merits of the very measures they pursue, endeavour to keep others from being as successful as they are themselves.

I am led to these observations by a benefit which I derived from the cure of the scab in sheep, inserted in the Encyclopædia Britannica, under the head *Sheep*, and after the following circumstances.—About a year ago I received a present of a flock of Bakewell ewes, and some of the Merino breed. When these animals came to my farm, they were all more or less scabby; and as I knew of no cure for this disease, being but a young farmer, I took the same mode which had been formerly practised with them, and had them once a fortnight rubbed with a liquor composed of tobacco juice and oil of turpentine. This operation put the sheep to the most agonizing torture, which continued to affect them almost to a degree of convulsion for several hours; and although I continued it for eight months, at the expense of half a guinea a time, I found that the flock, so far from being cured, was daily getting worse. I made every attempt to obtain information upon the subject, through the medium of those persons whom I judged likely to be able to give it; but in vain;—and I was generally informed, that the extreme fatness of the Bakewell sheep was the cause of the scab being with that breed incurable. Before parting with such a valuable flock, which was my intention, I thought of looking for a cure into the Encyclopædia; and I immediately, although the term of Michaelmas was several weeks past, and the weather very rainy and cold, had the flock rubbed according to Sir Joseph Banks's plan. This had an immediate good effect: in four or five days the scab began to rise, and in a very short time came entirely away, leaving the skin quite clean. Since this rubbing, the flock has been perfectly healthy, and I have not the smallest doubt that it will continue

so. The expense of the ointment may be about twenty shillings for threescore; and I certainly never received so much satisfaction for so small a sum. I am very sensible, from my own recollection of English flocks having the blue mark many years back, that this mode is known very generally over England, and I dare say in many parts of Scotland; but I have every reason to believe, from conversations with many sheep-farmers in the Highlands, that it is very far from being either generally practised, or even known as a cure there. I therefore beg a place for it among your liberal pages; because I believe, the great esteem, and general circulation which the Farmer's Magazine possesses, will be most likely to bring it into reputation in the Highlands.

I am, Sir, your constant reader,

24th Dec. 1807. SEVERUS.

Extract from the Encyclopædia Britannica, above referred to.

'But the ſimpleſt and moſt efficacious remedy for this diſeaſe, was communicated to the Society for the Encouragement of Arts, &c. by Sir Joſeph Banks.

'Take one pound of quickſilver, half a pound of Venice turpentine, half a pint of oil of turpentine, and four pounds of hogs-lard; let them be rubbed in a mortar till the quickſilver is thoroughly incorporated with the other ingredients. For the proper mode of doing which, it may be right to take the advice, or even the aſſiſtance of ſome apothecary, or other perſon uſed to make ſuch mixtures.

'The method of uſing the ointment is this: Beginning at the head of the sheep, and proceeding from between the ears, along the back, to the end of the tail, the wool is to be divided in a furrow till the ſkin can be touched; and as the furrow is made, the finger ſlightly dipped in the ointment is to be drawn along the bottom of it, where it will leave a blue ſtain on the ſkin and adjoining wool. From this furrow ſimilar ones muſt be drawn down the ſhoulders and thighs to the legs, as far as they are woolly; and if the animal is much infected, two more ſhould be drawn along each ſide, parallel to that on the back, and one down each ſide, between the fore and hind legs.

'Immediately after being dreſſed, it is uſual to turn the ſheep among other ſtock, without any fear of the infection being communicated; and there is ſcarcely an inſtance of a ſheep ſuffering any injury from the application. In a few days the blotches dry up, the itching ceaſes, and the animal is completely cured. It is generally, however, thought proper not to delay the operation beyond Michaelmas.

'The *hippoboſca ovina*, called in Lincolnſhire Sheep-fagg, an animal well known to all ſhepherds, which lives among the wool, and is hurtful to the thriving of ſheep, both by the pain its bite occaſions, and the blood it ſucks, is deſtroyed by this application, and the wool is not at all injured. Our wool-buyers purchaſe the fleeces on which the

the ſtain of the ointment is viſible, rather in preference to others, from an opinion that the uſe of it having preſerved the animal from being vexed either with the ſcab or faggs, the wool is leſs liable to the defects of joints or knots; a fault obſerved to proceed from every ſudden ſtop in the thriving of the animal, either from want of food, or from diſeaſe.

'This mode of curing was brought into that part of Lincolnſhire where my property is ſituated, about twelve years ago, by Mr Stephenſon of Maveham, and is now ſo generally received, that the ſcab, which uſed to be the terror of the farmers, and which frequently deterred the more careful of them from taking the advantage of paſturing their ſheep in the fertile and extenſive commons with which that diſtrict abounds, is no longer regarded with any apprehenſion. By far the moſt of them have their ſtock anointed in autumn, when they return from the common, whether they ſhow any ſymptoms of ſcab or not; and having done ſo, conclude them ſafe for ſome time from either giving or receiving infection. There are people who employ themſelves in the buſineſs, and contract to anoint our large ſheep at 5s. a ſcore, inſuring for that price the ſucceſs of the operation; that is, agreeing, in caſe any of the ſheep break out afreſh, to repeat the operation *gratis*, even ſome months afterwards.'

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Utility of Sheep Houses in Stormy Weather.

——————— Oft the whirlwind's wing
Sweeps up the burden of whole wintry plains
At one wide waſt; and o'er the hapleſs flocks,
Hid in the hollow of two neighbouring hills,
The billowy tempeſt whelms.

SIR,

I OBSERVE many accounts of the loss of sheep, in the falls and drifts of snow in November last; on which I beg leave to remark, that this could hardly happen, if sheep-farmers were to accommodate their flocks with houses; because sheep, which are even alleged to foresee the approach of a storm, naturally run to those houses for shelter in the tempest, instead of the hollow places they are otherwise obliged to betake themselves to, and in which they are frequently buried among the snow. A. S.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Ploughing by Moonlight.

SIR,

AMONGST all the inventions and improvements recorded in your valuable Magazine, there is one of a nature so extremely

simple and obvious, that I am not a little surprized at the consideration of its appearing unknown, or at least unpractised, by the cultivators of the country in general. This is nothing more nor less than ploughing by the light of the moon; by the judicious use of which, in any thing of tolerable weather, I conceive that a double yoking may be obtained in the depth of winter, as well as in the advanced periods of spring, or even the middle of summer. This bold opinion may startle many of your readers, some of whom may possibly pronounce him who holds it, under *lunar* influence; but such scruples I maintain to be the effect of prejudice, which holds the understandings of men in base captivity during all ages, and even less or more in the most enlightened epochs.

The idea struck myself one day by chance, as I was walking alone in the fields. I soon afterwards mentioned it to one or two friends, who seemed equally astonished at its novelty and absurdity; notwithstanding of which, I had courage to broach it to my ploughman, and was happy to prevail on him to put the matter to the test. We readily agreed that it would be proper to open the land, or draw the first furrows of the ridges with daylight; and, as it was past the height of the moon, I recommended the mornings for the trial, desiring the man to be yoked by five o'clock, and continue till ten; then rest two hours, and take a second yoking from twelve till four. This makes nine hours ploughing in the day; and, as horses go quicker in winter than summer, they would probably do more work in nine hours of the former season, than in ten of the latter. My man exhibited a laudable degree of anxiety, and commenced the experiment by two successive morning yokings, which he executed much to my satisfaction upon stubble ground, from which I intend so far to transgress the rules of good husbandry, as to take a second crop of oats. Though both mornings were hazy and close, the work was surprizingly good, and the quantity performed exceeded my expectation. Indeed he was yoked by four o'clock instead of five, and the horses went quicker than they were accustomed to do by daylight.

We suspended our proceedings until another moon came to our aid, by which time we had got upon a lea field. We then took two evening yokings, which succeeded wonderfully well; and having thus ascertained the practicability of the plan, beyond the possibility of doubt, I have desisted in the mean time; because I perceive that my tillage will be sufficiently forward, without resorting to any extraordinary modes of exertion.

Since these trials were made, I have learned, accidentally, that moonlight ploughing was once practised in Inverness-shire, but

but as much from the motive of obtaining the light of the sun for amusement, as for business. I claim, however, the merit of originality, inasmuch as I never heard of any such thing until I had reduced it to practice.

My ideas go still further; for I would propose the experiment of lanterns, or lamps, when the moon fails. I have little genius for mechanics, and shall not pretend to describe the best kind or construction of such succours; only, I do not despair of seeing the trial made. My man, who has already proved the moonlight, expresses his willingness to attempt the lamps whenever I please, and gives it as his opinion, that this artificial light should be suspended from an iron rod, fixed on the point of the beam; in which case, I presume the bottom of the lamp, or lantern, ought to be of glass, or some other substance equally transparent as the sides; but, should it not answer to have the light any way attached to either plough or horses, a boy might be employed to carry it along, which would in some measure correspond with the drivers, who are still now and then to be seen guiding a pair of horses in the plough, even at noon-day. This latter expedient is perhaps the only one which can succeed. Supposing such a practice to be generally introduced, what a gratifying and amusing spectacle would it present?

The intemperance and fickleness of the weather during this season, are frequently such as to prevent horses from being employed for whole days together; but, were we to resort to moonlight and artificial light, as I have just suggested, the advantages would be soon felt, and become conspicuous. The weather is often more temperate during the night than during the day; and advantage could be taken of this, without exposing either men or horses to unnecessary hardship and abuse.

We have heard of farm servants being equipped with waterproof coats or waggoners' frocks, whilst some similar covers have been provided for their horses, by which means they can go on through wet and dry. I shall make no allusions here, lest, in an unguarded moment, some piece of humour should escape from my pen, exposing me to some extravagant charge of wicked designs, as happened not long ago with your Wigtonshire reporter; but shall only observe, in general terms, that I doubt the utility and efficacy of these equipments for farm purposes.

Wet ploughing can by no means be commended; on the contrary, it is universally understood to be injurious. Upon extensive corn farms, perhaps a sufficiency of employment may be obtained, by carting out the deposites of the straw-yard, collecting materials for compost, &c. when the ground is in an improper state for the plough; but the occurrence of such interruptions

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tions requires, that the greater efforts should be made to forward the operations of the plough, when the soil is in a state to admit thereof. Trusting, therefore, that my new system may find advocates amongst your numerous and intelligent readers, I am, Sir, yours, &c.

GALLOVIDIÆ NOVITIUS.

January 1808.

NOTE BY THE CONDUCTOR.

Lord Sommerville, when at the head of the Board of Agriculture, complained that husbandmen had more knowledge than practice; therefore, constantly recommended improvement in the latter as preferable to the former. But when his Lordship wished to extend practical improvement, we are confident he did not entertain an idea of such improvements as are instanced by our correspondent, far less that they would be first introduced in the district alluded to. But, without insisting on these matters, we are in duty bound to remark, that wet ploughing is at all times mischievous, binding the soil, lessening the pasture of artificial plants, and encouraging the growth of natural weeds. One sure rule may be laid down upon this subject, viz. that when rain is so heavy as to wet the ploughman through his coat, the land must suffer less or more from being stirred at such a a time. With regard to moonlight ploughing, we shall only remark, that it may be practicable, but seldom can be necessary. It is not with winter work that farmers find difficulty in getting forward, but principally with the operations of spring and summer, that any difficulty occurs. We praise the ingenuity of our correspondent, though not disposed to recommend the *improvement* which he has so well described.

N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

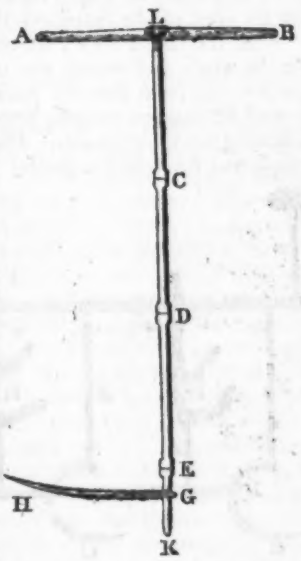
Plan for cutting Tangle or Seaware.

"Hæ nugæ seria ducunt."

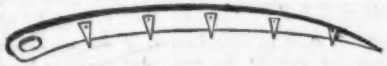
SIR,

ABOUT twelve months ago you was good enough to honour a paper of mine, 'On the Cultivation of Kelp,' with a place in your valuable Magazine. I then hinted, that I had a plan in contemplation for cutting the tangle, a kind of sea-ware, never wholly uncovered

uncovered, and much of it never seen, even at the lowest ebbs of the sea. Of course, it is a substance which has hitherto been in a great degree unappropriated for the use of manufactures, and only partially used for the benefit of agriculture. As a drawing will save much elaborate description, I subjoin a sketch of the implement I propose for cutting the tangle, which, for perspicuity, I shall call a *tangle-cutter*.



A B is an wooden handle 2½ feet long, fixed in a common boring iron E L, which may be made longer or shorter as occasion requires, by unscrewing it at the joints C, D, or E. The tangle-cutter may be formed of an old scythe screwed at right angles on the handle E L. It consists of three parts, E G containing a male screw at E; G H the scythe or knife, which may have an inclination rather a little upwards; and G K the heel on which the cutter moves. G K may be 3½ inches long, and G E about 3 or 4 inches long; so that the part H K E may be carried in one's hand without inconvenience. The parts or limbs L C, C D, and D E, may be cylindrical, of about ¼ths of an inch in diameter, and each of them 3½ feet long or thereabouts. As the edge of the cutter may suffer much by striking against rocks, it will be adviseable to fit it with protectors, at intervals of six or eight inches, as represented on figure 2. Each of these may be about the thickness of a penny piece, with a sharp point and a double edge sufficiently sharp to cut a tangle: they may be fixed on the upper side of the knife with screw nails, so as they may be taken off to be sharpened when requisite: these teeth need not project over the surface of the knife more than half an inch.

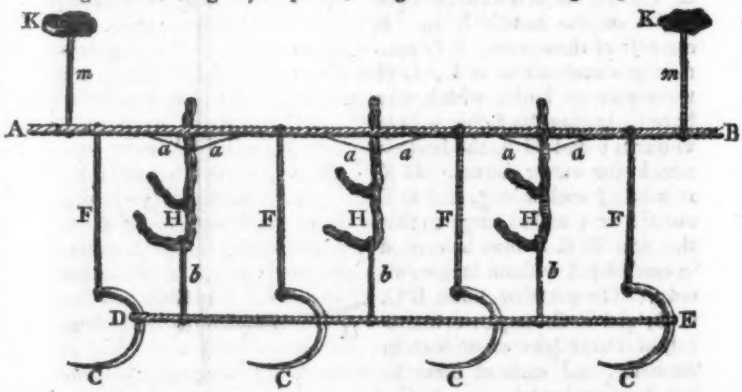


It is almoſt unneceſſary to ſay, that the tangle-cutter is meant for the uſe of a perſon in a boat at ſea: while at work, the boat muſt drop anchors, or pretty large ſtones at ſtem and ſtern to keep her ſteady. The cutter may be uſed with ſufficient force, in the

ſame

ſame way and poſition as a carpenter uſes a common wimble; altering its vertical poſition to one ſide or t'other, as rocks or ſtones may obſtruct its motion. It may be uſed at the depth of ſeveral fathoms. A box, with a bit of common window glaſs in one end of it, cloſe pottied to exclude the water, will ſerve to diſcover the bottom under water, ten or twelve fathoms deep; and a ſcrew-key ſhould always accompany the cutter to unſcrew the limbs if neceſſary, which get very tight together, owing to the neceſſity of having the edge of the cutter reverſe to the unſcrewing operation.

After the tangle is cut, the next ſtep is to get it to dry land. As the winds and waves are not to be truſted, and as the tangle does not ſwim near the ſurface like the common kelp ware, it muſt be dragged over the bottom. This I propoſe doing by the following ſimple apparatus. Hang on a common rope (of what length and ſtrength you pleaſe) drags of the following ſhape.



A B is a pretty ſtout rope, on which the whole apparatus is hung; C C C C are iron hooks or drags, about double the ſize of a common ſickle or reaping hook, ſuſpended to A B by ſmaller ropes F F F F, each of which may be about 2 feet in length, and tied to A B at intervals of 2 feet. Each of theſe drags has one hole or eye at the top, and another ſmaller hole through the centre. D E is a ſtout cord paſſing through the laſt mentioned holes, in order to preſerve the drags ſteady, and their concavities in the ſame line, or always facing the ſhore. H H H are branches of trees placed in the ſame poſition as the drags; they alſo ſerve as drags, and likewiſe give the whole apparatus (which I ſhall call a tangle-gatherer) a proper buoyancy and erection. It is evident, if theſe branches were fixed at one point only, that they would loſe the poſition neceſſary for raking the bottom. To obviate this, they muſt be tied to D E by the cords *b b b*, and alſo to A B by

a a a a a a,

a a a a a a, as in the figure. The gatherer is apt to catch hold of rocks or ſtones in the operation of drawing it to the ſhore; therefore, corks or buoys may be attached to A B by the cords *m m*, at intervals of about fifteen feet, ſo as a perſon in a boat may eaſily diſentangle the drags by pulling *m m*. The gatherer being ſunk round the ware cut, is drawn to the ſhore with its contents, in the ſame manner as a drag-net. As the tangle is a heavy ſubſtance, perhaps a moveable windlaſs might be uſed to advantage in drawing the gatherer to the ſhore, in the ſame way as ſalmon nets are worked at ſome fiſhing ſtations. The figure on foregoing page repreſents the tangle-gatherer in the poſition it ſhould hold when under water.

I could have wiſhed much to have had it in my power to have furniſhed you at this time with the reſult of an experiment with theſe implements on a large ſcale; but the badneſs of the weather and other avocations, have prevented my accompliſhing this. Being yeſterday engaged in trying the power of the cutter, a gentleman from the Iſle of Sky, Lachlan Mackinnon Eſq. of Corry, was accidentally paſſing in a boat. I ſtated to him my plan, and ſhowed him the operation of the cutter, and he ſeemed to think it would anſwer my expectations. I truſt he will excuſe the freedom I now uſe with his name, as I did not mention my intention of doing ſo when I ſaw him. Being a gentleman of great ſkill and activity, and much engaged in the purchaſe and manufacture of kelp, he mentioned that he had propoſed this ſeaſon to manufacture kelp from cut tangle, and preferred my plan of cutting and gathering it to the one he had in view. For theſe reaſons, and as the ſeaſon approaches for kelp-making and potatoe-planting, if you ſhall think the above communication worthy of a place in the Farmer's Magazine, you will oblige me by inſerting it in your firſt Number.

There are other improvements I have in contemplation for the cutting operation,—ſuch as a decked boat of a peculiar conſtruction fitted with a variety of cutters moveable by a horizontal arm, adapted to levers with longitudinal joints, embracing the upright ſpindles of the cutters. It would be neceſſary, in ſuch a machine, that the cutters could be elevated or depreſſed at pleaſure:—this, I ſuppoſe, could be effected by rack-work. A machine of this ſort would cut the tangle, and move the boat to a new ſtation, by the ſame motion. This would render dropping anchors unneceſſary, and might perform a great deal of work in a ſhort time. But the conſtruction of ſuch an apparatus requires more time, and better workmen, than I can command at preſent. If I am ſucceſsful, I may perhaps trouble you with the reſult at a future period. In the mean time, I ſhould be glad to hear of any of your correſpondents taking up this ſubject, and proving the practicability

lity and efficacy of theſe projections. It may at leaſt ſtimulate more ingenious men to work on this ſubject; and if I ſhall be the means of doing ſo, and of putting it in the power of every poor man on the ſhores of the Highlands of Scotland to raiſe one boll of potatoes more for his family, I ſhall be amply rewarded; and ſhall have the vanity to think, that I cooperate with the great and humane exertions of Government, and aſſiſt equally in preventing emigration as ſome of our more elaborate and learned authors.

As I have mentioned emigration, I beg the liberty of ſaying a few words on that ſubject. I believe no unprejudiced perſon who has reſided for ſome years in the Highlands, and poſſeſſed the opportunity, and taken the trouble to know the real ſtate of ſociety in this hitherto inacceſſible and uncultivated country, will be ſo much inclined as ſome ſpeculative gentlemen appear to be, to join in the *hue-and-cry* againſt the great calamity and danger of depopulation. I grant it is a moſt plauſible ſubject, and affords great ſcope for humane ſentiments, and patriotic declamation, but a much greater latitude for the exertion of humanity, by a cordial cooperation of Highland and Lowland proprietors. How many diſtricts in Scotland would thankfully receive, on good wages, a great portion of the ſuperfluous population of the Highlands, particularly in the department of agriculture? How many thouſands of theſe Highlanders in the ſhires of Inverneſs, Roſs, Sutherland, and Caithneſs, live moſtly on potatoes, in poor dwellings without chimnies and without glaſs. A late writer ſays the Highlanders do not now live in this ſtyle: I ſuppoſe he means in the ſouthern Highland counties; with which, however, I am not particularly acquainted. If correſponding ſocieties were eſtabliſhed in every Highland pariſh, with pariſhes ſituated in diſtricts advancing in improvement and cultivation, a progreſſive drain might be formed, ſufficient, at leaſt, to provide for the greater part of the riſing generation of Highlanders. But this cooperation would require to be cordial, particularly on the part of the Highland gentlemen. Some authors maintain, that the introduction of ſheep was the great and original cauſe of emigration: others, again, ſay that the ſpirit of emigrating took its riſe at an earlier period, and from a quite different cauſe. Theſe laſt, I am pretty certain, are moſt correct; though it is not to be doubted, that the extenſion of ſheep-farming is now one of the cauſes. But it is certainly true, that the ſpirit of emigration was firſt excited by an extenſion of the diſſolution of the bond of feudal union between the laird and his vaſſal. The Highland chieftain no longer reſided a mighty and beloved potentate among his friends and his vaſſals; ſtrangers were introduced, perhaps ſheep-farmers. Pride, diſappointment, hatred, and diſcontent, inflamed probably, in ſome diſtricts,

diſtricts, by religious animoſities, raged in the breaſts of a hitherto faithful, and always a proud tenantry. This gave the lead to emigration; the ſucceſſion was more eaſy; a Transatlantic voyage loſt its terrors. The ſame excitements remain, and the ſame paſſions are kept alive, and muſt be ſo, in a certain degree, till the ſpirit of feudaliſm ſhall vaniſh,—God grant how ſoon. Hitherto, there has been no field for employing the induſtry of the Highlanders, excepting the Caledonian canal, and Government roads, which are great bleſſings to the people. There are no improvements almoſt worth mentioning, in the extenſive diſtricts above mentioned. Highlanders are vain, lazy, and indolent from habit; but habit eaſily gives way to the opportunity and proſpect of gain, and a fair remuneration for labour, though this laſt is as yet little more than a novelty to Highlanders. Many writers deplore, in very feeling language, the hopeleſs ſituation of the population of theſe diſtricts: and it is not to be doubted, that their ſituation in general is to be pitied and lamented. But, in order not to give too much up to lamentation, it is to be recollected, that vaſt numbers of theſe people have their neareſt friends and relatives beyond the Atlantic. Some diſappointments, perhaps not of the firſt importance, and the flattering hopes of better things, tend to alleviate and counteract thoſe feelings, which are too apt to overpower the humane author in his cloſet.

Many people are zealous advocates for the *crofting* ſyſtem: this, however, ſo far as I have witneſſed, is no doubt ſome relief; but it does not ſeem calculated to anſwer the humane ideas entertained of it. In ſhort, it is a poor circumſcribed ſyſtem. Others cry, eſtabliſh manufactures,—and hope for ſuccour from this quarter; but many natural and moral difficulties diſcourage their eſtabliſhment in the Highlands. Some remedy is undoubtedly neceſſary; and I humbly apprehend it would well ſuit the clergymen and beſt men in the pariſhes above alluded to, to attempt ſome plan ſimilar to the above, digeſted by ſome perſon of greater abilities than I pretend to. I am not capable of viewing the effects of emigration with the penetrating eye of a political arithmetician. The above ideas have ariſen much more from being forced on my attention, from my local ſituation and avocations, than from deep reading or excogitation, which I hope will excuſe their faults and inaccuracies. I ſhall only add further, that I never could be ſo alarmed with the fears of the country being depopulated, as many perſons ſeem to be: theſe perſons, however, I believe, are in general Lowlanders. I hope our free and humane Government will never think of taking coercive meaſures, to oblige a multitude of our countrymen to live in a ſtarved ſtate, for the purpoſe of recruiting his Majeſty's army and navy.

D.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On Farm Buildings, with an Account of a New Species of Roof.

SIR,

IT is the first principle of rural economy, that every farm should be provided with buildings suited to its extent and produce; with a house, to accommodate the farmer and his family; and with offices, to protect, from the injuries of the weather, his implements, his cattle, and his crop. The erection of these must precede any encouragement which a proprietor can bestow, and any improvement which a tenant can undertake. Man and beast are the primary agents in every agricultural operation. Each, for enjoying health, requires a species of shelter adapted to his habitudes. To each this shelter must be provided before any operation can be successfully conducted, or even prudently commenced.

This principle is so evident, that it meets with an easy and a general assent. At the commencement of every lease, a dwelling-house and offices are provided for the farm, by every proprietor, however illiberal; and, in the present circumstances of Scotland, it is sometimes imagined, that the necessary accommodation may be obtained, on his part, without much trouble or expense. As this country has been so long stocked with inhabitants, and so much crowded with population, as to admit, or, if you please, to require, frequent partial emigrations, every part of its surface sufficiently valuable to compensate the bare trouble of occupation, must, before that occurrence, have been converted into property. In the progress of improvement, this property has been generally committed to the management of professional farmers, and is cultivated by them on leases of a definite duration. On every farm there are found houses, generally of ancient date, certainly of a rude construction. At the expiration of the lease, these, with the lands appertaining, revert into the possesion of the proprietor. Both are delivered *simpliciter* to the incoming tenant, on a new lease; and the procedure is justified on the maxim, that the successor should be contented with that accommodation which satisfied all his predecessors; more particularly, as special provisions were inserted in every lease to prevent deterioration, from either the lapse of time, or the fury of the elements; and as every outgoing tenant was bound to have the houses on his farm in habitable condition; or, as it is expressed in technical language, *wind and water tight*.

This system still prevails in many parts of Scotland. Instances of it occur, not only on the bleak and barren shores of the Western Highlands, but also in many insulated recesses among the Grampian

Grampian mountains, and in the upland districts of almost all the midland and southern counties. To those regions, the faintest dawn of improvement has scarcely penetrated. A race of farmers still there exist, who unthinkingly follow the rude husbandry, and contentedly inhabit the wretched hovels, of former times. There is no reason to imagine, that this antiquated system is extending its reign. On the contrary, it is probable that it is almost universally on the decline. It may not, however, be improper to state its disadvantages, and, if possible, to hasten its downfal.

Wherever this barbarous system prevails, it generally happens, that the charge of erecting, as well as of repairing, farm-houses, falls to the share of the tenant. In such hands, from the want of ability, and even of inclination, the work is always imperfectly performed.* His lease is of no great duration; he has no motive to give greater durability to his erections; he is satisfied, if at the end of his lease he can deliver them, with a dry roof, and standing walls, into the hands of his successor. Though such houses may possess the requisite conditions of being habitable, still, they are so greatly decayed as to oblige the incoming tenant to undertake immediate and extensive ameliorations. It is expensive to rebuild: it is cheaper to repair. The latter alternative is naturally adopted; and, from the original imperfections of the workmanship, the reparations are so multiplied as to become cumbrously numerous, and painfully inconvenient. An estate, under this system of management, is easily recognized at a distance, by the passing traveller. He observes the farm-houses wearing

* A system radically similar to this, prevails where it should least be expected—in England, the head of the British empire, and even in London—the metropolis of England. Almost every house is there built, not upon feus, which are tantamount to perpetuity, but on leases, which are generally of no great duration. The noble courtier and the opulent merchant, are placed in the same situation, and obliged to adopt the same practice, with the most depressed and indigent farmer in Scotland. The first inquiry of the architect employed to build a house in town, is, what is the length of the lease of the site; and, to adapt to it the durability of his workmanship, is the principal secret of his art. To this cause, perhaps, may be assigned the inferiority in external appearance, of towns in England, when brought into comparison with those of Scotland. If English citizens, under the disadvantage of a transient lease, were to increase the durability or elegance of their houses, they would foolishly imitate the improvident magnificence of the great Duke of Marlborough, whose splendid mansion in Westminster, erected on the uncommonly long tenure of a centennial lease, must, in the course of a few months, revert, with its site, to the Lords of the Treasury.

wearing the most determined and forbidding aspect of poverty; the walls, built of stones gathered from fields under tillage, and rounded by the friction of the plough, seldom perpendicular; the small apertures, falsely called windows, sometimes adorned with a few broken panes of glass to admit the luxury of light, and sometimes plugged with a bit of deal to exclude both light and cold; and the doors, so low as to be entered only in a stooping posture, affording to the inmates a daily lesson of humility. If, prompted by curiosity, he attempt to enter, he would not advance far, without stumbling on a buttress propping the tottering wall, or knocking his head against a post supporting the decaying roof; and if at length he penetrate into the *obscure sojourn*, the smoke, the dirt, and the stink which assail his senses, would intimate the necessity of a precipitate retreat.

A physician of the city, judging from the fate of his ordinary patients, would condemn such wretched habitations as injurious to health. Experience, in most cases, shows the falsehood of this opinion. The pure air of the country, and the athletic labours of husbandry, communicate so much vigour to the human constitution, that peasants seem to suffer little inconvenience from the wretchedness of their habitations; they live long, enjoy health, and appear contented. Those hovels, with all their imperfections, are perfectly invulnerable by the *slang* of sentimentalists. They are only a counterpart, with considerable improvements, to the cabins in which the hardy long-lived inhabitants of the northern regions of Europe, Asia, and America, choose to reside during great part of the year. A political economist would assert, with greater justice, that such a system is injurious, immediately to the profits of the farmer, and ultimately to the rents of the landlord. Industry is not natural to man. It must be excited; excited too, not by penalties, but by encouragement. The first and last encouragement which a tenant can receive, is the substantial improvement of his house and offices. If he obtain greater comfort or convenience at home, he will not be long in displaying industry abroad in his fields, and in attempting to increase their productiveness, that, by adding to his profits, he may be enabled to support an enlarged expenditure, and to accommodate his style of living to the advantages of his habitation. The first exertions of awakening industry, are directed to the removal of stones which obstructed the plough; to the draining of quagmires which were inaccessible to horses; and to the filling of gullies which were hollowed by wintry torrents. Those improvements are permanent. Obstacles are removed—never to return. The farmer derives great and immediate advantage; but he enjoys it only for a limited period. The landlord is treading on his heels, reaps the full fruit of his labours at the expiration

piration of his lease, and, in so far as the rent under the subsequent leaſe exceeds that under the preceding, after making a trifling deduction for the increaſing opulence of the country, and for the progreſſive depreciation of money, in the ſame proportion he obſerves the value of his lands augmented; at the inconſiderable expenſe, on his part, of providing ſuitable accommodation to the tenant. But if this encouragement be denied, the induſtry of the farmer remains dormant, and the property of the landlord continues in a ſtate of nature. A bad farm-houſe is an infallible criterion of an unproductive and unimproved farm. On the ordinary principles of human conduct, no motive can be found to prompt that man, who lives contentedly in a hovel, and wallows inceſſantly in dirt, to enhance, by cleanlineſs, the value of his dairy; or, by dreſſing his fields, to improve the quality, and to increaſe the quantity, of his crop. No principle ſeems more evident, than that, on large dairy farms, a ſuite of apartments ſhould be provided to contain the milk, butter, and cheeſe. I have known many farms, where from twenty to thirty milch cows were kept, deſtitute of this neceſſary accommodation; and have ſeen the barn, as being the only edifice unoccupied during ſummer, appropriated to ſupply the defect. In ſuch circumſtances, the produce of the dairy, from the impoſſibility of proper management, muſt be of inferior value. A neceſſity alſo ariſes of diſpoſing of it in a recent ſtate, and often at an unfavourable market, ere it be depreciated by the acceſſion of dirt, or waſted by the depredations of vermin. Little inconvenience may, perhaps, be felt in the neighbourhood of large cities, as the prices are there exceſſively high, and the demand uniformly great: but, in the remoter diſtricts of Scotland, and in all the northern iſles, where theſe advantages are denied, the inferior and inadequate price received for the produce of the dairy, loudly calls upon proprietors to improve the habitations of their tenants.

Happily for the country, a more liberal ſyſtem has been recently introduced, and is generally adopted. Inſtead of preventives of deterioration on the part of the tenant, leaſes contain ſtipulations of improvement on the part of the proprietor. The former hovels are condemned. New buildings are propoſed to be erected, ſuitable to the produce and extent of the farm. The charge of the erection is divided between the proprietor and the tenant: the former burdens himſelf with the price of the materials and the wages of the workmen; the latter is bound to perform all the neceſſary carriage. It is but juſtice to add, that thoſe erections are generally finiſhed in ſuch a ſubſtantial manner, as to ſuperſede, during the currency of an ordinary leaſe, the neceſſity of introducing *the wind and water tight* ſtipulation—the former ſafeguard of the proprietor's intereſt.

This ſyſtem claims great merit. As a ſtep to improvement, it deſerves praiſe. If it fall ſhort of perfection, that praiſe muſt be qualified. It may be queſtioned, on the principles of equity, whether it is proper to ſubject a tenant to any ſhare in the erection of permanent buildings, in which he has only a temporary intereſt, or even to the heavy charge of carrying the neceſſary materials, at the imminent danger of obſtructing his agricultural operations. From the ſtrong deſire of obtaining a comfortable habitation, he may be willing to ſubmit to that burden; but it does not thence follow that it is equitable, or even prudent, to impoſe it on his ſhoulders. However near the ſite of the farm-houſe may be to the quarry, where the ſtones for building are raiſed; or to the markets, where wood, lime and ſlates are reſpectively purchaſed, the quantity of labour requiſite for collecting ſo many, and ſo heavy materials, muſt be productive of confuſion and embarraſſment to a profeſſional farmer. Frequent caſes may be adduced to prove, that thoſe inconveniences are little felt, or entirely avoided. In many diſtricts, farms ſtill retain their original ſmallneſs, and agriculture remains in its ancient barbarity. The wretched occupants—they deſerve not the name of cultivators—muſt pay their rents, which are generally heavy, and which always exceed the produce of their poſſeſſions, by alien, and more lucrative employments. They are, therefore, to be met with every where but on their fields,—tranſporting grain to markets, repairing parochial and turnpike roads, or carrying coals to ſupply manufacturing villages. It is no diſadvantage for ſuch perſons, to be burdened with the carriage of materials for erecting their houſes, provided they receive, before the expiration of their leaſes, an adequate compenſation for their labour, in deductions from their rents. But it were unfair reaſoning, to draw a general concluſion reſpecting actual cultivators from ſuch caſes, however numerous. To give that wretched anomalous claſs of occupants, the ſpecific deſignation of farmers, is to pervert language, and to outrage common ſenſe. They derive nothing from their diminutive poſſeſſions but a ſcanty ſubſiſtence. They pay their rents from the wages received for their alien occupations. Their barbarous practices avail nothing to eſtabliſh the propriety of ſubjecting profeſſional farmers to the *carriage* ſtipulation. A farmer upon principle endeavours to form his eſtabliſhment with ſuch ſcrupulous accuracy, that there may be nothing defective and nothing ſuperfluous. He renders, as far as practicable, the produce of his farm adequate to the maintenance of his ſtock, and the power of his ſtock equal to the labour of his farm. An obligation on him to carry all the materials requiſite for the erection of his houſe and offices, muſt at once unhinge this ſyſtematic arrangement, and introduce

troduce inextricable confuſion. A new fund of labour is created. The ſtrength of his ſtock muſt be increaſed without any increaſe in the produce of his farm. The neceſſity thence ariſes of undertaking an alien occupation, and of ſuperadding the duty of a carrier to that of a farmer.

The uſual practice, in this ſituation, is to ſave expenſe, by keeping a ſmall carrying eſtabliſhment. Its inadequate power ſoon becomes too apparent to be concealed. The common expedient of increaſing the taſk of the carriers affords but a precarious and an inſufficient ſupply. A neceſſity is ſoon felt of drawing upon the labour of the farm, and of appropriating part of the ſtock employed in huſbandry to ſupply the deficient ſtrength of the carrying eſtabliſhment. The farmer is thus placed in ſuch an arduous ſituation, as to be obliged at once to overwork his ſtock, and to underwork his farm. The immediate outlay may thus be rendered inconſiderable; but this ſaving is dearly bought at the expenſe of the increaſed tear and wear of the ſtock, from the increaſe of its labour, and of the diminiſhed productiveneſs of the farm from the imperfection of its culture. Perhaps the actual loſs, however, ſuſtained on the whole, is of leſs conſequence than the perplexity, irritation and degradation, with which it is attended. The erection of farm-houſes, generally takes place at the commencement of a new leaſe. The minds of farmers are then highly, perhaps unreaſonably ſanguine. Conſidering the aſtoniſhing and unprecedented rents which they engage to pay on the renewal of their leaſes, it is ſurely the intereſt of the proprietor to cheriſh in them a ſpirit of enterpriſe, and to facilitate, rather than to embarraſs, their future operations. Now, no device can be contrived more effectual to defeat this purpoſe, than to impoſe on them, at that ſeaſon, the tedious and burdenſome ſtipulation of carriage. They are ſubjected, during the currency of a whole year, a period no more than ſufficient for the erection of farm-buildings, to the contingent and arbitrary demands of a village architect. At his call, they are obliged to ſuſpend the culture of their fields, perhaps at a time the moſt inconvenient, and to employ their teams in collecting materials for the ſupply of his mechanics. A farmer of ſpirit can ill brook ſuch humiliation. Environed with difficulties and mortifications, he begins to ſuſpect the goodlineſs of his inheritance. Seeing the ſupply of materials to mechanics a duty paramount to the culture of his farm, he finds himſelf degraded from the proud ſituation of an independent farmer, and reduced to the neceſſity of becoming the ſervant of ſervants. Looking around to his fields, refuſing to put forth their ſtrength from the want of neceſſary culture, and feeling himſelf unable to correct the defect when embarraſſed with alien occupations, he ſinks into deſpond-

ency, allows the ſpirit of induſtry gradually to decline, and ultimately quits his farm with a deſpairing heart and a ſhattered fortune.

The most eligible plan for a farmer, when subjected to the *carriage* stipulation, is to form a distinct establishment for its performance, independent of that set apart for husbandry. Between these, he should draw a broad line of distinction. He is thus enabled to contend successfully with the difficulties of his situation. The jarring occupations in which he is engaged, may be conducted without much interference or embarrassment. His farm, cultivated by his hinds, and yielding its fruit in its season, will make an ample return of profit for his outlay: his burden of carriage, regularly performed by his carriers, will be gradually shifted from his shoulders, and will, at length, discover to him the extent of his loss;—a loss which falls irremediably upon his capital, and whose amount is directly as the expense of his carrying establishment.

If this plan should be preferred, and with every farmer of spirit and capital, it certainly merits a decided preference over the usual mode of compromising the difficulty, at the risk of depressing his mind, and deteriorating his farm,—another consequence follows, of great importance, as it is of practical utility. It is easy to demonstrate, on the simplest principles of political economy, that the farmer will execute his *carriage* burden at the least possible expense, by devolving it at once upon a contractor. From the effects of the division of labour, it appears that the same weight can be cheaper conveyed to the same distance in the ordinary routine of a professional carrier, than by the most economical arrangements of an actual farmer. The latter must incur some expense in forming his carrying establishment, suffer some inconvenience during its continuance from the novelty of his employment, and sustain, unavoidably, considerable loss in winding up the concern. The former, having an establishment always ready and disciplined for such services, is entirely exempted from these disadvantages. In whatever degree they operate to the detriment of the farmer, in the same degree is the carrier enabled to execute the same labour at a cheaper rate.

From these observations, it appears that a farmer possesses no peculiar advantage to facilitate the carriage of materials for the erection of his house and offices; and that, if this burden is imposed on him at the commencement, or even during the currency of his lease, it is his interest to transfer the performance of it to a professional carrier, as it is in his hands that it can be executed at the least possible expense. The proprietor, therefore, and the farmer, stand precisely in the same situation. Both of them are disqualified

disqualified for undertaking the performance of tedious and heavy carriages; both of them must find it their advantage to devolve the task on a contractor; both of them possess equal facilities for negociating the contract. It now remains to consider, which of them should defray the contractor's charge. If the tenant must make payment, the sum is paid—never to return. It is permanently fixed in certain buildings—in an immoveable subject, of which he enjoys a temporary possession, but from which he must retire at the expiration of his lease. On the plainest principles of equity, it is evident that he ought not to expend such a large portion of his capital, without the possibility of reimbursement. The proprietor is the only party which retains a permanent interest in farm buildings, and which derives a permanent revenue from the use of them: it is fair thence to conclude, that he should defray the whole expense attending the original erection. It is sometimes argued, that the tenant is compensated for the expense incurred under the *carriage* stipulation, by the use of those buildings which he receives during the currency of his lease. But it ought to be remembered, that money too is a subject which produces a revenue; that the sum expended by the farmer might have been laid out at interest; and that this interest, if accumulating for fourteen years, a period considerably shorter than the ordinary term of a lease, becomes equal to the original principal. Independently of this consideration, the tendency of the argument is objectionable, as it gives sanction to a rule always variable, and frequently iniquitous. In some situations, where the markets are near the intended site of the buildings, the carriage of the rude materials thither may be comparatively easy; but, in many districts, where the markets are at a distance, and where they are ill supplied, though near, the burden of the farmer becomes tedious and intolerable. If the same compensation, however, be awarded for carriage in both of these cases;—in each of them, either the proprietor, or the tenant, receives an undue advantage;—in each of them, either the proprietor, or the tenant, inevitably sustains considerable loss. It were needless to expose further a procedure so injurious, and so arbitrary. If the proprietor intend *bona fide* to defray the whole expense attending the erection of farm buildings, (and this, on his part, justice clearly requires, and the tenant ultimately expects), the mode of payment should be free from ambiguity or vexation. No benefit, but much injury, I have already shown, can ensue from employing the mediation of the tenant in executing the carriage of the materials. The proprietor ought, therefore, to have recourse to some other party which can undertake the task without inconvenience; and to bargain with a professional carrier,

who is both able and willing to perform it, at the least possible expense.

If this arrangement be so advantageous, there is no reason to doubt that it will at length be generally adopted. The sooner that it is introduced on any estate, the sooner is the proprietor consulting his real interest, and providing for his future opulence. Duty and interest are generally found to coincide. In the present case, the coincidence is most exact between what is just and what is gainful. Farm-houses, though an expensive, are not an unproductive, appendage to an estate. They are as much a part of the proprietor's capital, as the lands on which they are built; they are as much an ingredient in the tenant's rent, as the fields which he cultivates. The rent is nominally paid at a certain sum per acre: but in estimating the value of the acre, the farmer attends, with equal scrupulousness, to the fertility of the soil on which his crop is to be raised, and to the commodiousness of the houses in which his family is to dwell, and in which his stock is to be secured. Indeed, farm buildings, consistently with the proprietor's interest, may be more than commodious,—may even approach to elegance. Farmers, like every other creature, *are made subject to vanity;* and like every class in society, part with their money for its gratification. Dull and phlegmatic as they are generally characterized, they have the external senses in sufficient perfection to perceive the advantages of a comfortable habitation;—they have their understandings enlightened enough to appreciate the value of substantial offices, in preserving the health of their cattle, by sheltering them from the severities of the seasons; in increasing the durability of their utensils, by protecting them from the vicissitudes of the weather; and in facilitating the management of their crop, by simplifying the process of extricating the grain, and preparing it for the market in a more perfect state.

After thus ascertaining the party by which farm-houses should be erected, it still remains to inquire into the extent of accommodation which they should contain; but on the discussion of this point I am not inclined to enter, as it would lead into a minute detail to which general reasoning might not be applicable. Much useful information on this subject has been communicated, in some recent Numbers of the Farmer's Magazine, particularly by R. r. r. in No. 22, and by Mr Erskine of Marr in No. 31. There is one principle, however, common to all farm-buildings,—the great extent of ground floor; on which a few concluding observations may be offered. This property is so peculiar, as to be characteristic of this species of architecture; and so essential, as never to be violated with impunity. Manufactures, in this respect, admit of very

very great latitude. The proceſſes of which they generally conſiſt, are ſo numerous and ſo diverſified, as to require every variety of ſituation from the dampneſs of a cellar, to the dryneſs of a garret; hence factories are built ſo high, with ſtory towering above ſtory, till the heads of the workmen grow giddy in aſcending to the roof. But ſuch is the nature of farm ſtock, animate as well as inanimate, that almoſt all of it muſt enter by a low door, and remain on the ground floor. On this account, farm-houſes conſiſt of long ranges of buildings ſcarcely riſing above one ſtory; hence the vaſt diſproportion between the extent of roof and the quantity of accommodation.

It is univerſally admitted, that a ſlated roof approaches the neareſt to perfection. Slates form an impenetrable, and an incombuſtible covering; are ſcarcely affected by the violence of the wind, or the viciſſitudes of the weather; and, if of a good quality, will laſt, with inconſiderable reparations, for a ſeries of ages. A ſlated roof, however, from the high price of the original materials, is always the moſt expenſive part of a houſe. From the great extent of roof, required in rural architecture, the expenſe on this ſcore is ſo enormous, as to induce many proprietors to adopt ſome cheaper ſubſtitute. Thatch, the venerable and pictureſque roof of other times, ſtill meets with a grateful preference. The diſadvantages to which it is ſubject, more than counterbalance the original cheapneſs of the materials. It is dangerous from its great combuſtibility; it becomes ultimately expenſive from requiring a complete renewal in the courſe of a few years, and partial reparations after every ſtorm that blows; it is directly injurious from the harbour which it affords to every ſpecies of vermin, and from waſting unproductively that ſtraw which ought to be conſumed as food for cattle, and returned as manure to the ground. Even tiles, though, in many reſpects, preferable to thatch, form but an imperfect ſubſtitute for ſlates. They require inceſſant reparations, being liable, from the form in which they are caſt, to be thrown down by the violence of ſtorms, and from the ſubſtance of which they are made, to be broken in pieces by changes of temperature. A new ſpecies of roof has been recently introduced into this country, which is free from all thoſe inconveniences, which is equal to ſlates in durability, and is executed at about half the expenſe.

The practice of covering the roof with paper, ſaturated with tar, is ſaid to have been brought from England. It was introduced about twenty years ago by Mr Wood, a ſhip-builder in Greenock. His example was long gazed upon in ſtupid ſilence. Frequent imitations have been lately executed in the vicinity of Glaſgow. Laſt ſummer, in the pariſh of Campſie, a pile of buildings

for

for preparing alum, and a village containing about fifty families, were erected with a paper roof. The advantages of this over every preceding ſubſtitute for ſlates, will appear from the following account of the common practice. The roof is much flattened. No higher elevation is required than is barely neceſſary to carry off water. The common proportion is one foot in height for every twelve of breadth. From the lightneſs of the paper covering, the couples are very ſlender, no more than three inches in breadth, and one inch and a half in thickneſs. Upon theſe are laid deals, half an inch in thickneſs, and dreſſed with a plane on the edges, that there may be no intervals at the joinings. The external cover is commonly ſheathing paper. * After being dipped in tar, raiſed nearly to the boiling point, that it might penetrate with greater facility, the ſheets of paper are allowed to dry for the ſpace of two days, by which time the tar is ſo perfectly imbibed as to become almoſt inviſible. The ſheets are again dipped in tar at a lower tempetature, and then, in the ſame manner as ſlates, nailed on the roof, overlapping one another ſo far as to be triple at the joinings, and double in every other part. Above the whole is laid a coat of tar boiled to the conſiſtency of pitch, on which fine ſmithy aſhes are paſſed through a ſieve to diminiſh the combuſtibility, and to prevent the liquefaction of the tar. This roof is executed at half the expenſe of one with ſlates. To enable any perſon to verify this calculation, it is only neceſſary to add, that one hundred weight of ſheathing paper, and a barrel of common tar, each of which now coſts about thirty ſhillings, are required for a Scotch rood of roof, or, in Engliſh meaſure, for every 36 ſquare yards.

On the preceding mode, which is the firſt that was adopted, ſome improvements have already been introduced. The only improvement, of obvious merit, was diſcovered by Mr William Ramſay of Glaſgow. This ingenious chemiſt uſes the tar extracted from wood in the formation of the pyrolignous † acid, and, by a peculiar

* This ſpecies of paper is a kind of paſteboard, and receives its name from being employed in ſheathing ſhips. There are few merchant veſſels ſecured by copper bottoms againſt the attack of worms. The cheaper defence of a coat of tar is employed, and found ſufficient againſt thoſe deſtructive animals. A covering of this paper ſaturated with tar is laid on the keel, and prevented from being waſhed away by an exterior coating of half inch deals. Theſe are attacked and perforated by the worm: but its further progreſs is arreſted as ſoon as it penetrates to the ſheathing paper.

† It is only of late that this acid has been prepared for the purpoſes of commerce. The materials from which it is extracted, are always hard

peculiar compoſition, makes it aſſume as cloſe a texture, and as bright a poliſh, as the fineſt marble. He alſo gives a preference to the coarſe paper commonly uſed for packages; as ſheathing paper, from being made without any glutinous ingredient, is apt when handled to fall in pieces. Other improvements may perhaps be made when this roof is more generally adopted, and more perfectly underſtood. It has been frequently employed on the factories, and habitations of manufacturers. Mr Speirs of Culcreuch, is the firſt country gentleman, ſo far as I know, who has introduced it on a houſe purely rural. The landed intereſt is juſtly averſe to imitate the dazzling plans of the mercantile world, and generally wait till their utility is evinced by the teſt of experience. This recommendation, the paper roof now decidedly poſſeſſes. Twenty years have elapſed ſince a public ſtore-houſe, at the harbour of Greenock, was roofed with paper; during that period, it has received no repairs, and, at the preſent day, it continues in perfect preſervation. I am, Sir, yours, &c.

JOHN GRAHAM.

Fintry Manse, 4. *Jan.* 1808.

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hard wood, commonly the coppice of oak. Theſe are placed in a veſſel, and ſubjected to the action of heat. The tar gradually oozes out, and is received at an inferior aperture: the acid riſes in the ſtate of fumes, and is condenſed in a refrigeratory. This ſubſtance, when ſubmitted to chemical analyſis, is found to be acetic acid, with a ſmall portion of empyreumatic oil. It promiſes to ſuperſede the vinegar of commerce, which is acetic acid in an impure and diluted ſtate, as it can be prepared at a much cheaper rate, and ſubſtituted for vinegar in every manufacture. The weakeſt vinegar is ſold at eighten-pence per gallon, while the ſame quantity of pyrolignous acid is ſold for ſixpence. As their reſpective ſtrength is found, from ſaturating any alkali, to be as 1 to 3, it appears that pyrolignous acid in effect is nine times cheaper than the vinegar of commerce. I have been informed by Mr Ramsay, that there is a probability of depriving the acid of its unpleaſant flavour, of introducing the uſe of it in the kitchen, and of employing it as a condiment for food.

ACCOUNT

ACCOUNT *of* WHEAT *sold in* HADDINGTON MARKET, *for ready Money, from November 7th* 1806, *to October 30th* 1807; *with the Weekly, Monthy, and Annual Average Prices; obligingly communicated by* Mr TODRICK, *clerk of the market.*

Date.	*Quantity.*	*Value.*			*Weekly Average.*			*Monthly Average.*		
1806.	BOLLS.	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*
Nov. 7.	974	1781	14	6	1	16	7			
14.	674	1196	4	0	1	15	$5\frac{11}{13}$			
21.	885	1576	17	6	1	15	$7\frac{3}{13}$			
28.	760	1360	0	0	1	15	$9\frac{5}{13}$			
	3293	5914	16	0		—		1	15	11
Dec. 5.	700	1318	2	6	1	17	$7\frac{1}{13}$			
12.	783	1546	7	0	1	19	$5\frac{11}{13}$			
19.	764	1454	7	0	1	18	$0\frac{10}{13}$			
26.	648	1201	0	4	1	17	$0\frac{9}{13}$			
	2895	5519	16	10		—		1	18	$1\frac{7}{13}$
1807.										
Jan. 2.	707	1286	9	6	1	16	$4\frac{8}{13}$			
9.	565	1071	17	6	1	17	$11\frac{1}{13}$			
16.	481	949	1	0	1	19	$5\frac{6}{13}$			
23.	513	968	14	6	1	17	$9\frac{5}{13}$			
30.	562	1045	17	6	1	17	$2\frac{9}{13}$			
	2828	5322	0	0		—		1	17	8
Feb. 6.	346	651	4	6	1	17	$7\frac{8}{13}$			
13.	555	1043	4	0	1	17	$7\frac{1}{13}$			
20.	631	1155	4	0	1	16	$7\frac{4}{13}$			
27.	445	845	15	6	1	18	$0\frac{1}{13}$			
	1977	3695	8	0		—		1	17	$4\frac{7}{13}$
Mar. 6.	511	986	3	6	1	18	$7\frac{2}{13}$			
13.	415	810	3	0	1	19	$0\frac{5}{13}$			
20.	259	517	6	6	1	19	$11\frac{4}{13}$			
27.	360	682	14	0	1	17	$11\frac{1}{13}$			
	1545	2996	7	0		—		1	18	$9\frac{1}{13}$
Apr. 3.	399	775	1	6	1	18	$10\frac{2}{13}$			
10.	312	614	17	3	1	19	$4\frac{11}{13}$			
17.	347	680	6	0	1	19	$2\frac{6}{13}$			
24.	577	1100	10	6	1	18	$1\frac{9}{13}$			
	1635	3170	15	3		—		1	18	$9\frac{1}{13}$

Date. 1807.	*Quantity.* BOLLS.	*Value.* £.	s.	d.	*Weekly Average.* £.	s.	d.	*Monthly Average.* £.	s.	d.
May 1.	582	1049	13	6	1	19	$5\frac{6}{13}$			
8.	382	736	19	6	1	18	7			
15.	492	932	16	0	1	17	11			
22.	516	950	1	6	1	17	$2\frac{6}{13}$			
29.	385	615	16	6	1	16	$9\frac{3}{13}$			
	2257	4285	7	0		—		1	17	$11\frac{7}{13}$
June 5.	341	645	17	6	1	17	$10\frac{6}{13}$			
12.	391	768	13	6	1	19	$0\frac{9}{13}$			
19.	584	1116	17	6	1	18	$2\frac{11}{13}$			
26.	433	847	4	6	1	19	$1\frac{4}{13}$			
	1749	3378	13	0		—		1	18	$6\frac{10}{13}$
July 3.	382	754	18	3	1	19	$6\frac{1}{13}$			
10.	428	851	10	6	1	19	$9\frac{5}{13}$			
17.	523	1064	10	0	2	0	$8\frac{6}{13}$			
24.	419	869	16	0	2	1	$6\frac{3}{13}$			
31.	346	688	18	6	1	19	$9\frac{10}{13}$			
	2098	4229	13	3		—		2	0	$3\frac{10}{13}$
Aug. 7.	376	690	8	0	1	16	$8\frac{8}{13}$			
14.	254	474	10	0	1	17	$4\frac{4}{13}$			
21.	456	869	16	0	1	18	$1\frac{9}{13}$			
28.	396	747	12	0	1	17	$9\frac{1}{13}$			
	1482	2782	6	0		—		1	17	$6\frac{6}{13}$
Sept. 4.	318	573	3	0	1	16	$0\frac{6}{13}$			
11.	375	658	14	0	1	15	$1\frac{6}{13}$			
18.	497	867	2	9	1	14	$10\frac{8}{13}$			
25.	597	1026	18	9	1	14	$4\frac{10}{13}$			
	1787	3125	18	6		—		1	14	$11\frac{9}{13}$
Oct. 2.	624	1036	5	0	1	13	$2\frac{6}{13}$			
9.	513	876	4	6	1	14	$1\frac{11}{13}$			
16.	469	802	2	0	1	14	$2\frac{5}{13}$			
23.	540	871	5	0	1	12	$3\frac{9}{13}$			
30.	550	877	12	0	1	11	$10\frac{11}{13}$			
	2696	4468	8	6		—		1	13	$1\frac{4}{13}$

ABSTRACT.

DATE.	*Monthly Quantity.* BOLLS.	*Monthly Value.* L.	s.	d.	*Monthly Average.* L.	s.	d.	*Annual Average.* L.	s.	d.
1806.										
November	3293	5914	16	0	1	15	11			
December	2895	5519	16	10	1	18	$1\frac{7}{12}$			
1807.										
January	2828	5322	0	0	1	17	8			
February	1977	3695	8	0	1	17	$4\frac{7}{12}$			
March	1545	2996	7	0	1	18	$9\frac{5}{12}$			
April	1635	3170	15	8	1	18	$9\frac{5}{12}$			
May	2257	4285	7	0	1	17	$11\frac{7}{12}$			
June	1749	3373	13	0	1	18	$6\frac{10}{12}$			
July	2098	4229	13	8	2	0	$3\frac{10}{12}$			
August	1482	2782	6	0	1	17	$6\frac{6}{12}$			
September	1787	3125	18	6	1	14	$11\frac{9}{12}$			
October	2696	4463	8	6	1	13	$1\frac{8}{12}$			
	26242	48879	9	4	—			1	17	3

N. B. The quantity of wheat sold of 1805, or from November 1. 1805, to November 1806, was 30,480 bolls, being 4138 bolls above the sales of crop 1806, during the like number of market days. The total produce of the sales, crop 1805, was 54,791*l.* 4s. 6d., which exceeds that of the present, as stated above, by no less a sum than 5911*l.* 15s. 2d. It deserves also to be noticed, that the sales from November 1804, to November 1805, amounted to 58,037*l.* 16s. 6d., which is 9158*l.* 7s. 2d. above the sales of last year. From these statements it appears, that the growing of wheat is not now such a profitable business as it was two years ago, notwithstanding that rent and labour have both increased in value within the period under consideration.

N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Selections from the Agricultural Lectures of Dr Walker.

SIR,

THE late Dr Walker, Professor of Natural History, read lectures on Agriculture in the university of Edinburgh, which I attended more than twenty years ago. I have selected a few remarks of his; and if the whole, or any of them, are worth inserting in your Magazine, they are at your service.

In

In the year 1708, a tenant of the Earl of Haddington, in East Lothian, had a horſe ſtolen from him, which he purſued to Newcaſtle; and, to prove his property, was obliged to ſend for two of his ſervants. In the interval, he obſerved them fallowing in that part of the country, and made himſelf maſter of the practice. It was the month of May, and his abſence, with that of his ſervants, had delayed the ſowing of a field he deſigned for barley. This field he fallowed upon his return; which was the firſt inſtance of fallowing in Scotland.

The firſt encloſures with hedges in Scotland, were made in East Lothian by ſome of Cromwell's ſoldiers.

Sown graſſes were firſt introduced into East Lothian, alſo from England, a few years after ſummer-fallowing. In the year 1673, all the cattle in England periſhed, except where they had ſown graſſes and hay. It used to be ſo in Scotland in a hard winter; and there is ſtill the ſame danger in the Highlands.

Without artificial graſſes, our country cannot arrive at its higheſt produce, either of corn or cattle.

The *Lolium perenne*, or ryegraſs, is not mentioned as a ſown graſs before 1636.

Ryegraſs is an impoveriſher of the ſoil, becauſe it has few radical leaves, and ſtarts out into ſtems like the *frumenta*; and becauſe it is generally allowed to run to ſeed, and even to ripen its ſeeds.

Clover, ryegraſs, lucern, and ſainfoin, are almoſt the only ſown graſſes known in Scotland, and the two laſt very little. Others are wanted, and it is probable may be beſt ſupplied from the natural paſture graſſes.

In ſummer, labouring horſes ought to be fed at the ſtall on green crops, at leaſt between yokings, which will give them more ſtrength for their afternoon's labour than they could acquire in double the time at paſture: and, if fed with ſown graſs, or tares, in the ſtable, they may be ſupported on one third of the extent of ground they would require for paſturage.

In winter, the farmer's work-horſes must be kept, at a great expenſe, upon hay and corn; but, in ſummer, upon clover or lucern, to be cut for them daily, they have not only a cheaper diet, but are kept in better order than on any dry forage whatever.

It is therefore an important view in agriculture, to furniſh the farmer with a green crop, fit to be cut for his horſes during as great a part of the year as poſſible.

Red clover and lucern ſeem to be the beſt green crops for cutting. But, in moſt parts of Scotland, a farmer cannot cut lucern for his horſes till the 1ſt of June, nor after the 1ſt of October;

October; and clover neither so soon nor so late. To supply him with a green crop during the months of May and October, and part of April and November, would be an essential benefit.

Columbine will afford a crop fit for cutting, April 15.; scented grass (Anthoxanthon) in May; burnet in October and part of November.

The only grasses which deserve to be tried as artificial pastures, are such as are known to be an agreeable and wholesome food for cattle, both green and dry, and which are of a size capable to afford such a weighty crop as may be profitable upon cultivation. They are the following.

Alopecurus pratensis.	Avena pubescens.
Anthoxanthon odoratum.	Juncus articulatus.
Agrostis capillaris.	Holcus lanatus et mollis.
Poa angustifolia.	Phleum pratense.
Avena pratensis.	Milium effusum.
Avena flavescens.	Aira aquatica.
Juncus squarrosus.	Poa pratensis.
Dactylis glomerata.	Festuca elatior.
Aira cœrulea.	Bromus giganteus.
Poa trivialis.	Avena elatior.
Poa annua.	Cynosurus cristatus.
Bromus secalinus.	

The Holcus lanatus, white grass, or Yorkshire fog, has not been much admired by some; but upon lands adapted for it, it yields a very great produce. Upon land of Mr William Corrie, at Dumfries, which was sleeched, it rose so remarkably as to exclude all other grasses, and so entirely occupied the soil, that the crop of hay was wholly composed of it. This crop amounted to 240 stones upon each Scotch acre, which was at least 50 stones more than would have been expected of ryegrass upon the same land. Before this land was sleeched, there had been but very little of the Holcus observed upon it. The Holcus hay is very salutary for all sorts of cattle; but it is everywhere observed, that it does not go so far as ryegrass hay, and that cattle eat much more of it, which is probably owing to its being softer and more agreeable to their taste.

The Juncus articulatus, or Spret, may also be made more useful. One great view in the agriculture of the grazing farms, is to augment the winter forage; for no more cattle can be kept, than what the winter forage supports. Hence a great loss in the summer produce of the country. Great fields and extensive meadows, in our mountainous countries, are covered with a thick tall crop of sprets. This plant there rises almost as unimpaired as if it had stood in an enclosure where there were no cattle;

cattle; for cattle do not touch it, if tolerably fed, except when it rises first. There is a great error to be observed among farmers in the management of this grass. Indeed, there is no part of husbandry of which farmers are in general more ignorant than that of pasture. A considerable part of this crop is usually cut for hay; but not generally till the month of September. This juncus, in its proper soil, is then between two and three feet high, come to seed, and so hard and rough as to afford nothing but hay of the coarsest and very worst quality. What they do not cut, is allowed to stand neglected by the cattle; and in winter falls down upon the ground, where it forms a thick cover of drys traw; and, in this case, the soil yields little food the whole year round.

By cutting sprets in the first week of July, they will make tolerable hay; and they will spring from the root, and form a green sward before winter. It would be worth while to cut sprets for this green sward, though they were to be thrown into the dunghill after they were cut.

Hay of all kinds cannot be cut too near the ground. What is left at the bottom is so much hay entirely lost, being neglected by the cattle, which pasture upon the after growth only. It is an error to imagine, that the rankness of the hay stubble promotes the springing of the grass. It has quite the opposite effect.

The Juncus squarrosus, or Stool Bent, is valuable, because it is less affected by cold than almost any other grass. It is of the greatest use to sheep in the month of February, being the only forage they then have that is green, fresh, and succulent.

The chief produce of Scotland, from the union of the Crowns to that of the Kingdoms, was cattle. The country was then nothing else but a grazing-field for England. But as Scotland has increased in arts and industry, though the numbers of cattle have been much enlarged, their exportation has diminished. This diminution began at the Union; and we may safely judge, in time to come, of the prosperity or decay of the country by the increase or decrease of this export. But plentiful exportation of corn may be made a security against famine: It promotes agrestic industry, is a real profit to the kingdom, and an advantage to the landed interest. I am, Sir, yours, &c.

A. S.

NOTE BY THE CONDUCTOR.

THE above remarks are inserted verbatim as they were sent us; therefore we are in duty bound to notice, that Dr Walker has fallen into an error respecting the introduction of summer fallow into Scotland, in assigning the merit of the introduction to a tenant of the Earl of Haddington. Summer fallow was prac-

tised in Scotland before 1708, though before that time the practice had not become general. The way in which fallow was introduced is already explained, p. 161. Vol. I. of this Magazine, where, upon the authority of several respectable gentlemen, it is stated, that John Walker, tenant in Beanston, in the parish of Prestonkirk, was the first person who summer-fallowed land in North Britain. The late Sir David Kinloch of Gilmerton constantly maintained the facts which are stated; and as Sir David's father was cotemporary with Mr Walker, and resided within half a mile of his house, and besides was in habits of intimacy with him, there can be no doubt concerning the correctness of what we stated.

We are not sure whether lucern can be advantageously cultivated in Scotland, any attempts hitherto made to produce this grass having almost in every case ended unsuccessfully. We know not a better article of green food, than what is produced from a mixture of broad clover and ryegrass; care being taken to proportion the quantity sown of the latter to the quality of the ground on which it is to be cultivated. Ryegrass, to be sure, is a scourger, when allowed to ripen its seed; but few farmers allow it to stand till in that stage. As a pasture grass, it is one of the earliest of which we are possessed; and if ate down in May, will rarely prove detrimental afterwards. In Scotland, no article of green food is fit for the scythe till the end of May, or first of June, except what is produced in meadows adjoining to some of our great towns; but after the first of June, there is not the slightest difficulty of procuring green food till the first of November, or longer, if frost does not intervene and destroy the crop. If tares are sown at different times, and in sufficient quantities, the two crops of clover may be not only connected together, but the period of green food extended considerably.

N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Proceedings of the SMITHFIELD CLUB.

SIR,

ALLOW me to present your readers with a brief account of the late proceedings of the *Smithfield Club*, an association of noblemen, gentlemen, and practical farmers, for the laudable purposes, by a public exhibition and premiums, of encouraging the effectual, early, and economic feeding of animals for the London market, and whose desire it is, to give every possible degree

gree of publicity to all such authentic documents, as they may be able to obtain, which are calculated to increase our knowledge of the comparative merits of different breeds of animals, and the best modes of treating each. On Wednesday evening the 9th of December, the cattle, sheep and pigs, began to arrive at *Mr David Sadler's* repository yard in Goswell-Street, near Smithfield Market, from different parts of the country, the stewards being in attendance to open and examine the regularity of the certificates, as the animals arrived that evening and early next morning; when the five following gentlemen, who had been appointed as judges for examining the animals, and awarding the premiums, viz. *Charles Gordon Gray Esq.*, of Tracey Park, near Bath; *Mr Thomas Barker*, grazier, of Wilsborough, Kent; *Mr John Ellman*, grazier, of Glynd, Sussex; *Mr John Hand*, butcher, of Carnaby Market, London; *Mr Thomas Ellard*, butcher, of Leadenhall Market, London; proceeded to compare the certificates, and examine the animals, and, before they parted, drew up and signed their award of the prizes, as the same are mentioned in the accounts of the animals, for which dead-weight returns have been made. The premiums in Classes II, III, IV, V, and VIII, (See this Mag. Vol. 8. p. 331.) were not adjudged; and the additional premium for the best ox in the first six Classes was adjudged to Mr Flowers's ox in Class I. On the next morning the show commenced, consisting of animals, whose owners were as follows, viz. The Duke of Bedford, six sheep;—William Boultbee, one pig;—James Butler, two pigs;—Samuel Chandler, two oxen;—John Edmonds, two oxen and three sheep;—William Flowers, two oxen;—Francis Ireland, a freemartin heifer;—Joseph Joyner, two oxen;—Joseph S. Joyner, two oxen;—Henry King junior, three sheep;—James King, two oxen;—Gilbert Maltby, three sheep;—George Marshall, a Durham bull;—Rev. Thomas Plaskett, six sheep;—Thomas Pickford, three oxen and seven sheep;—Joseph Pigg, one pig;—Thomas Purdy, six sheep;—John Roads, two pigs;—Robert Mitchel Robinson, six sheep;—David Sadler, two Cape sheep and a pig;—William Slow, one pig;—John Terret, one ox;—The Earl of Thanet, two oxen;—Thomas Walker, three sheep;—Martin Webber, two oxen;—John Westcar, two oxen and six sheep;—Charles Callis Western Esq., six sheep, a pig and a boar.

The show continued during Friday, Saturday, and Monday, and was, as usual, visited by a great concourse of noblemen, gentlemen, and practical men, engaged in agriculture and its attendant arts; and much interesting discussion took place on the merits and defects of the animals shown. Mr Thomas Pickford

produced some very fine turnips, from his newly enclosed farm in Hertfordshire; and many prospectuses and notices interesting to agriculturists, were stuck up or distributed.

During the continuance of the show, three numerous meetings of the Club were held for business, *His Grace the Duke of Bedford* in the chair, when the 22 following new members were elected, viz. Charles Robert Henry Bailey, John Cator, William Coles, Lieutenant-Colonel William Cunningham, Colonel David Cunynghame, William Flowers, Benjamin Gray junior, Joseph Halsey Esq. M. P., Benjamin Hobhouse Esq. M. P., Henry Hoyte, John Hutton, James Ingram, John King, Robert Kirk, William Lester, Gilbert Maltby, Thomas Mercer, Robert Clarke Paul, William Marmaduke Sellon, Joshua Trimmer, William Walker (of Woolsthorpe), and John Wing. The officers for the following year were reelected as follows, viz. *President*, His Grace the Duke of Bedford—*Stewards*, Robert Bing Esq., Mr Henry King junior—*Treasurer*, Mr Paul Giblett—*Secretary*, Mr John Farey.

The conditions and premiums offered last year were read and taken into consideration, and several alterations were made for the year ensuing. The principal of these consisted in reducing the weight of grass-fed steers, Class VII. of last year, to less than 100 stone, and introducing a new Class before it, for oxen of 100 stone or upwards, with two prizes therein of 20 and 10 guineas respectively: the forms of certificates to be sent with the animals in the different Classes were settled, and ordered to be printed on the back of the bill of premiums, for the information of candidates.

It was resolved to choose no more than *three* Judges for awarding the prizes, instead of *five* heretofore chosen; and to leave the description of persons to be chosen (whether breeders, graziers, salesmen or butchers) to the discretion of the future meetings for appointing Judges. Five gentlemen graziers were nominated, and the secretary was directed to write to each, and request to know their willingness to act, in the event of their being chosen as Judges at the next meeting, on the 1st of March, which is fixed for that purpose.

The treasurer reported the state of the funds of the Club, and of the arrears of subscriptions; and directions were given for letters to be written by the secretary to all the members in arrear.

In the afternoon of the first day of the show, about 30 of the members of the Club dined together at the Freemason's Tavern; and, on the last day, the annual dinner of the Club was held at the same place; of which upwards of 130 of the principal agriculturists of the kingdom partook, his Grace the president being in the chair, who, after dinner, publicly adjudged the premiums

as below, noticed the alterations made in the premiums proposed for next year, and gave, as toasts, a number of names and sentiments, ever held dear by enlightened British agriculturists. Lord Somerville, on this occasion, called the attention of the landowners present, to the expediency which may perhaps occur, his Lordship said, of relinquishing the restrictions in their leases, against the growing of hemp on their farms, in case the interruptions of our trade with the Baltic should continue, and the expected quantity of *sun* hemp from the East Indies should prove inadequate to supply the navy with cordage.

I am, Sir, your obedient servant,

JOHN FAREY, *Secretary.*

12. *Upper Crown-Street, Westminster*, 22. *January* 1808.

CLASS I.

For Oxen or Steers of the Herefordshire Breed, weighing 120 *Stones* (of 8 lib.) *or upwards, which have worked Two Years at least.*

PRIZES *of Thirty Guineas.—Mr William Flowers's* deep red Hereford Ox.

According to the certificate of *Mr Flowers* of Hardwick, Bucks, and the attestations of *Mr Michael Brooks*, and *Mr John Watkins* also of Hardwick, this ox was bred by *James Wallwyn Esq.* of Marshmastall, near Ledbury, Herefordshire; was worked two years preceding the 11th of October 1806, and turned off from work in good store condition: he was put up to stall on the 14th September 1807, having eaten no corn or cake previous to that time. From the 1st of October till the 30th November 1807, he ate 9 cwt. 70 lib. of hay, and 420 oil cakes.

The return from *Mr J. Dobits*, butcher, of No. 46, Shoreditch, who killed this ox, states the dead-weights as follows, viz.

	st.	lib.
Carcase or quarters	210	3
Hide and horns	16	0
Head, tongue and pluck	16	2
Entrails and contents	45	7
Blood	10	1

Mr William Flowers's Hereford Ox, which came as a Companion to the above.

The return from *Mr William Browning*, butcher, of Leather Lane, who killed this ox, states the dead-weights as follows, viz.

	st.	lib.
Carcase or quarters	167	4
Loose fat	21	6
Hide and horns	15	0
Head, pluck and feet	14	1
Entrails (empty)	12	1
Blood	5	0

CLASS V.

For Oxen or Steers of the Devonshire Breed, weighing 120 *Stone or upwards, that have been worked Two Years at the least.*

Mr Martin Webber's Two Devonshire Oxen, No. 1. and No. 2.

According to the certificate of *Mr Webber* of Ilchester, Somersetshire, and the attestations of *Mr Matthew Hobbs*, *Mr J. Bryant Phelps*, and *Mr William Ireland*, these oxen were bred by *Mr Surrage* of Chepstable, and worked by him for three years ending the 25th of February 1807: they were bought of him at Wevelscornbe market on the next day, were then five years old, and very lean: they lay at grass until the 1st of October; from which time, till the 30th of November, they ate 3290 lib. of hay, and have since travelled 170 miles: they have had no corn or cake.

The return from *Mr John Lomas*, butcher, Kensington, who killed the ox No. 1, states the dead-weights as follows, viz.

	st.	lib
Carcase or quarters	153	6
Loose fat	29	0
Hide and horns	11	6
Head and tongue	4	1
Feet	3	2
Heart and lights	2	3
Liver and melt	1	7

The return from *Mr John Lomas*, butcher, Kensington, who killed the ox No. 2, states the dead-weights as follows, viz.

	st.	lib.
Carcase or quarters	141	0
Loose fat	23	5
Hide and horns	10	2
Head and tongue	3	6
Feet	2	7
Heart and lights	2	1
Liver and melt	2	2

CLASS VI.

For Oxen or Steers of any mixed Breed, weighing 120 *Stone or upwards, that have been worked Two Years at the least.*

PRIZE *of Twenty Guineas.—Mr Samuel Chandler's* French and Devon Ox.

According to the certificate of *Mr Chandler* of Moreton, near Aylesbury, Bucks, and the attestations of *Mr Richard Griffin*, and *Mr Henry Chandler*, this ox was bred by *Mr Greenal* of Milcote, in Warwickshire, from a French bull belonging to *Mr Thomas Crook* of Tytherton, Wilts, and a Devonshire cow; he is six years old, was worked two years, until the wheat sowing was finished

finished in October 1806, and was sold by Mr Greenal in the beginning of April 1807 in store condition, from very inferior hay on which he had been kept. He was put to grass on the 10th of May, and continued until the 1st of October; from which time, till the 30th of November, he consumed 972 lib. of hay, and 180 linseed cakes.

The return from *Mr Philip Reynolds*, butcher, No. 123, High-Street, Borough, who killed this ox, states the dead-weights as follows, viz.

	st.	lib.
Carcase or quarters	136	2
Loose fat	24	3
Hide and horns	10	6
Head and tongue	5	3
Feet	2	6
Heart, skirts, sweetbread, melt, kidneys	2	4
Tripe (without fat), feck, reed, liver and gall, lights, bladder, entrails	9	2
Contents of entrails	5	5
Blood	6	6

CLASS VII.

For Oxen or Steers of any Description, under the Weight of 120 *Stone, whether worked or not, fed without Corn or Cake.*

PRIZE *of Ten Guineas.—Mr Samuel Chandler's* Black Scotch Highland Ox.

According to the certificate of *Mr Chandler* of Moreton, near Aylesbury, Bucks, and the attestation of *Mr Richard Griffin*, and *Mr Henry Chandler*, this ox was purchased in a lean state, in the autumn of 1806; lay out in a pasture during the whole of the following winter, without any fodder; continued at grass till the 10th of October 1807; since which time he has had hay and Swedish turnips.

The return from *Mr Philip Reynolds*, butcher, of No. 123, High-Street, Borough, who killed this ox, states the dead-weights as follows, viz.

	st.	lib.
Carcase or quarters	81	4
Loose fat	10	0
Hide	8	1
Head and tongue	4	1
Feet	2	0
Heart, skirts, sweetbread, melt, kidneys	1	4
Tripe (without fat), feck, reed, liver and gall, lights, bladder, entrails	7	0
Contents of entrails	6	0
Blood	4	4

CLASS IX.

For One-Year Old long-woolled Wether Sheep, fed without Corn or Cake.

PRIZE *of Ten Guineas.—Mr Gilbert Maltby's* three, Shearling, new Leicester Wethers.

According to the certificate of *Mr Maltby* of Hoveringham, Nottinghamshire, these sheep were bred by him, from a ram hired of Mr *Nathaniel Stubbins* of Holmpierpoint, Notts; are from nineteen to twenty-one months old, and have been kept upon grass, turnips and cabbages only.

The return from *Mr William Jennings*, butcher, Aldersgate Street, who killed these sheep, states the dead weights as follows, *viz.*

	Sheep, No. 1. st.	lib.	*Sheep, No.* 2. st.	lib.	*Sheep, No.* 3. st.	lib.
Carcases or quarters, and heads	16	6	16	2	19	1
Loose fat	1	6¼	1	3¼	1	3¼
Skins	2	0¼	2	4¼	2	4
Plucks (heart, liver, and lights)	0	4¼	0	4¼	0	5
Entrails (empty)	0	5	0	7½	1	2¼
Blood, contents of entrails, and loss in killing	2	2½	2	4½	2	2½
Totals of the above	24	1	24	3	27	2
Live weights, just before slaughtering	24	1	24	3	27	2

Rev. *Thomas Plaskett's* three, Shearling, new Leicester Wethers.

According to the certificate of the Reverend Mr *Plaskett* of Weston House, near Thame in Oxfordshire, these sheep were bred and fed by him, and are one year old: from the 1st of May to the 20th of September, they ran in the same pasture (old turf) with beasts of different descriptions; from that time they fed in an eddish (old turf) until the 20th of November, when they were confined to one-fourth of an acre of the same, and supplied with 63 lib. of hay, and 420 lib. of turnips, to the 6th of December.

The return from *Mr Henry King*, Newgate Market, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1. st.	lib.	*Sheep, No.* 2. st.	lib.	*Sheep, No.* 3. st.	lib.
Carcases or quarters, and heads	15	2	14	6	14	0
Loose fat	1	4	1	6	1	6
Skins	2	0¼	2	2	1	5
Plucks (heart, liver, and lights)	0	4¼	0	4¼	0	4¼
Entrails and contents	1	6¼	1	5¼	1	4
Blood, and loss in killing	1	0¼	0	7	0	6¼
Totals of the above	22	2	21	7	20	2
Live weights, just before slaughtering	22	2	21	7	20	2

Mr Robert Mitchel Robinson's three, Shearling, new Leicester Wethers.

According to the certificate of *Mr Robinson* of Church-Hall, Kelvedon, Essex, these sheep were bred by him on his farm in Witham: were one year old in April last: for more than the last eight months they have ate nothing but grass, and never had any corn or cake.

The return from *Mr Arrowsmith*, butcher, King's Street, Bloomsbury, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1.		*Sheep, No.* 2.		*Sheep, No.* 3.	
	st.	lib.	st.	lib.	st.	lib.
Carcases or quarters, and heads	17	0	16	2	14	4
Loose fat - -	2	4½	1	6½	1	4½

CLASS X.

For Two-Year Old long-woolled Wether Sheep, fed without Corn or Cake.

PRIZE *of Ten Guineas.*—Reverend *Thomas Plaskett's* three, Two-Shear, new Leicester Wethers.

According to the certificate of the Reverend *Mr Plaskett* of Weston House, near Thame in Oxfordshire, these sheep were bred and fed by him, and are two years old: from the 1st of May to the 20th of September, they ran in the same pasture (old turf) with beasts of different descriptions; from that time they fed in an eddish (old turf) until the 20th of November, when they were confined to one-fourth of an acre of the same, and supplied with 63 lib. of hay and 420 lib. of turnips, to the 6th of December.

The return from *Mr Henry King*, Newgate Market, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1.		*Sheep, No.* 2.		*Sheep, No.* 3.	
	st.	lib.	st.	lib.	st.	lib.
Carcases or quarters, and heads	18	4	18	7	18	4
Loose fat - - -	1	5½	1	4½	2	1
Skins - - - -	2	5	2	4½	2	5
Plucks (heart, liver, and lights)	0	5	0	4½	0	4½
Entrails and contents -	1	3	1	4	1	3
Blood, and loss in killing -	1	0½	1	0	0	7½
Totals of the above -	25	7	26	1	26	1
Live weights, just before slaughtering -	25	7	26	1	26	1

Mr Robert Mitchel Robinson's three Two-Shear new Leicester Wethers.

According

According to the certificate of *Mr Robinson* of Church-Hall, Kelvedon, Essex, these sheep were bred by him on his farm in Witham; the sheep No. 1. was two years old in the beginning of April last, the other two were yeaned twins in the same month, by a shearling ewe, who brought them up: for more than the last eight months, they have ate nothing but grass, and never had any corn or cake.

The return from *Mr Arrowsmith*, butcher, King's Street, Bloomsbury, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1.		*Sheep, No. 2.*		*Sheep, No. 3.*	
	st.	lib.	st.	lib.	st.	lib.
Carcases or quarters, and heads	18	1	16	5	16	5
Loose fat - -	2	2¼	2	0¼	1	6¼

CLASS XI.

For One-Year Old, short-woolled, Wether Sheep, fed without Corn or Cake.

PRIZE *of Ten Guineas.*—*Mr Henry King junior's* three, One-Shear, South Down Wethers.

According to the certificate of *Mr Henry King, junior*, of Plaiston, in Essex, and the attestation of *Mr Henry King, senior*, these sheep were bred by *Mr John Ellman* of Glynd in Sussex; were bought of him lambs, in October 1806; since which they have grazed in the open marsh, without shelter, and have had nothing but grass.

The return from *Mr Henry King, senior*, Newgate Market, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1.		*Sheep, No. 2.*		*Sheep, No. 3.*	
	st.	lib.	st.	lib.	st.	lib.
Carcases or quarters, and heads	12	5	11	5	12	2
Loose fat - - -	2	0	1	5¼	1	2
Skins - - - -	1	4	1	4	1	3
Plucks (heart, liver, and lights)	0	4¼	0	4	0	4
Entrails and contents -	1	4¼	1	2¼	1	2
Blood, and loss in killing -	1	0¼	0	6¼	0	6
Totals of the above	19	2	17	4	17	3
Live weights, just before slaughtering -	19	2	17	4	17	3

His Grace the *Duke of Bedford's* three, One-Shear, South Down Wethers.

According to the certificate of *Mr Thomas French*, bailiff on His Grace's farm at Maulden in Bedfordshire, and the attestation of

of *Mr John Newman*, these sheep were bred and fed on the above farm, and had neither corn nor cake.

The return from *Mr Paul Giblett*, butcher, No. 138, New Bond Street, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1. st.	lib.	*Sheep, No.* 2. st.	lib.	*Sheep, No.* 3, st.	lib.
Carcases or quarters	11	5	11	5	11	7
Heads	0	4½	0	4½	0	4
Loose fat	1	6	2	0	2	0
Skins	1	5	1	3	1	4
Plucks (heart, liver, and lights)	0	3	0	4	0	3
Entrails (empty)	1	1	1	0	1	1
Blood, contents of entrails, and loss in killing	1	1½	1	2½	1	2
Totals of the above	18	2	18	3	18	5
Live weights, just before slaughtering	18	2	18	3	18	5

CLASS XII.

For Two-Year Old, short-woolled, Wether Sheep, fed without Corn or Cake.

PRIZE *of Ten Guineas.*—His Grace the Duke of Bedford's three, two-shear, South Down Wethers.

According to the certificate of *Mr Thomas French*, bailiff on his Grace's farm at Maulden, in Bedfordshire, and the attestation of *Mr John Newman*, these sheep were bred and fed on the above farm, and had neither corn nor cake.

The return from *Mr Paul Giblett*, butcher, No. 138., New Bond Street, who killed these sheep, states the dead-weights as follows, *viz.*

	Sheep, No. 1. st.	lib.	*Sheep, No.* 2. st.	lib.	*Sheep, No.* 3, st.	lib.
Carcases or quarters	12	5	12	4	13	5
Heads	0	4½	0	4½	0	4½
Loose fat	2	1	2	0	1	7
Skins	1	6	1	4	1	5
Plucks (heart, liver, and lights)	0	3	0	3	0	3
Entrails (empty)	1	0	0	6	1	0
Blood, contents of entrails, and loss in killing	1	3½	1	3½	1	5½
Totals of the above	19	7	19	1	20	6
Live weights, just before slaughtering	19	7	19	1	20	6

Charles

Charles Callis Western, Esq., three, two-shear, South Down Wethers.

According to the certificate of *Mr Western*, of Felix Hall, near Kelvedon, Essex, and the attestation of *William Church*, his shepherd, these sheep were bred by him, about the latter end of February 1805, although two of them show six teeth: They have not been followed by lean stock, when eating coleseed or turnips, but were treated as the other fatting sheep, and have eaten neither corn nor cake.

The return from *Mr Henry King*, Newgate Market, who killed these sheep, states the dead-weights as follows, viz.

	Sheep, No. 1. st.	lib.	*Sheep, No.* 2. st.	lib.	*Sheep, No.* 3. st.	lib.
Carcases or quarters, and heads	12	1	11	1	12	2
Loose fat - -	1	6	1	5	2	0¼
Skins - -	1	6¼	1	5	1	3¼
Plucks (heart, liver, and lights)	0	4¼	0	3¼	0	4¼
Entrails and contents -	1	2	1	1	1	1¼
Blood, and loss in killing -	0	6	0	6¼	0	6¼
Totals of the above -	18	2	16	6	18	2
Live weights, just before slaughtering -	18	2	16	6	18	2

CLASS XIII.

For Pigs under Two Years Old.

PRIZE *of Ten Guineas.*—Mr John Roads's 15 months old black and white Berkshire Pig.

According to the certificate of *Mr Roads*, Aston Abbots, near Aylesbury, Bucks, and the attestations of *Mr John Westcar* of Creslar, *Mr William Roads* of Aston Abbots, and *Mr John Westbrook*, this pig was bred by *Mr John Westbrook* of Bisham, in Berkshire, in the beginning of September 1806, and has been fed on skimmed milk, with the addition of only 4 bushels of barley meal.

The return from *Mr David Davies*, pork-butcher, NO. 483., Oxford Street, who killed this pig, states the dead-weights as follows, viz.

	st.	lib.
Carcase - -	52	2
Head - - -	3	5¼
Fat (crow, caul, &c.)	1	6
Feet - -	0	3¼
Pluck - -	1	1
Entrails (empty, with fat)	0	7

Mr

Mr John Reads's Berkshire Pig, which came as a companion to the above.

The return from *Mr David Davies*, pork-butcher, No. 483., Oxford Street, who killed this pig, states the dead-weights as follows, *viz.*

	st.	lib.
Carcase - -	41	5
Head - -	3	5
Fat (crow, caul, &c.)	1	3
Feet - -	0	4
Pluck - - -	0	7
Entrails (empty, with fat)	0	5½

CLASS XIV.

For Pigs under One Year Old.

PRIZE *of Ten Guineas.—Mr William Slow's* 9 months old black and white high Suffolk Pig.

According to the certificate of *Mr Slow*, shepherd to Earl Cowper, of Cole Green, near Hertford, this pig was bred by *Mr Smith*, of Coats Farm, in Yardley, Herts, on the 9th of March 1807: It was sold to *William Slow* on the 6th of June, and has since been fed, first with potatoes and pollard, then with barley meal, and lastly with peas, pollard and potatoes; in the whole, 8 bushels and 1 strike of pollard, 4 bushels of potatoes, 5 bushels of barley meal, 2 bushels of peas.

The return from *Mr Edward Bates*, butcher, Goswell Street, who killed this pig, states the dead-weights as follows, *viz.*

	st.	lib.
Carcase - - -	27	1
Head and feet - - -	2	1
Fat (crow, caul, &c.) and pluck - -	1	5½
Entrails and contents - -	1	2½
Blood, 7 lib.; hoofs, hair, and loss in killing, 1 lib.	1	0
Total of the above -	33	2
Live-weight, just before slaughtering -	33	2

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Kincardineshire Resolutions on the Property Tax.

SIR,

As your Magazine is the only work of the kind in Scotland, which forms a bond of union among the farming interest, the members of the meeting, at which the enclosed resolutions

lutions were adopted, are desirous that a copy of them and their minutes should be transmitted to you; and they trust that you will give to them that publicity and circulation which you may judge best for promoting the object of the meeting, and for combining together the whole occupiers of land in Scotland, in making a respectful and moderate application to Government, for the purpose of endeavouring to procure redress of the grievance which they labour under from the property act, as it presently exists. I am, Sir, your most obedient servant,

WILLIAM YOUNG.

Dunnottar, by Stonehaven, Jan. 23, 1808.

PROPERTY TAX ON FARMERS.

Laurencekirk, January 11, 1808.

At a meeting of FARMERS in the County of KINCARDINE, called by public advertisement, to concert proper measures for endeavouring to obtain redress of the grievances laboured under by the Occupiers of Land in Scotland, in consequence of the mode of assessment applicable to their case, under the existing law, imposing a Tax on the Profits arising from Property, Professions, &c.

Dr WILLIAM YOUNG *of Fawsyde, chosen Preses.*

THE meeting having maturely deliberated on the important subject, for the consideration of which they were convened, fully concurred in the universal approbation of the general principle of the Property Tax; and, as the agricultural interest, which contributes very largely to our flourishing revenue, has hitherto borne its burdens without a murmur or complaint, this meeting were anxious to have it clearly understood, that they are still most willing to contribute, with cheerfulness, their just proportion of this tax; and that their only object is to obtain an alteration of the erroneous rule of estimating the profits of farmers according to their rents.

It was obvious to this meeting, that the rate of land rent being governed by local circumstances, farms of the same extent and intrinsic value must differ in amount of rent payable to the landlord, according as they are different with respect to local advantages.

By thus adapting the rate of rent to local situation, the profits of farmers are equalized and proportioned to their capital; and it therefore can hardly ever happen that two tenants, paying similar sums to the landlord, are on an equality as to the amount of their profits.

The profits of a farmer must, in some measure, also depend on the terms of his agreement with the proprietor of the lands; and

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an assessment of rent must, of course, bear lightest on him who has been most fortunate in his bargain, and pays comparatively least rent to his landlord.

For these, and many other reasons that might be assigned, the rents of lands do not afford a just criterion for estimating the profits of the occupiers; and an assessment proceeding on it is found to be unequal in its operation among farmers themselves, while it places them, collectively, in a situation less favourable than that of any other class of persons liable to the tax.

The profits of farmers are, at least, as fluctuating and precarious as those of mercantile persons, who are taxed only according to the amount of their gains, after deducting any losses they may sustain in the course of business; and if no profits remain on their transactions, they are justly exempted from taxation.

It often occurs, from the failure of crops, the loss of live stock, the fall of markets, the rise of the price of labour, and the variety of casualties incident to the business of a farmer, that occupiers of land reap *no profits whatever*; yet, such is the existing mode of assessment applicable to their case, they are subjected to a fixed sum of tax, in the same manner as if their gains were both *certain* and *invariable*.

In estimating the profits of mercantile persons, their capital is properly excluded from the account: but, in Scotland, the farmer is, in many cases, obliged to contribute a proportion of his *capital*, under the description of *gains*. For although it most commonly happens that lands in this country are let to be improved, and in such cases, until his improvements be completed, the tenant, instead of drawing any yearly profit, must, annually, sink a part of his capital; yet, during all this time, he is, by the present rule of assessment, taxed for profits which do not exist; and at the expiry of the first seven years of his lease, when he only begins to get a return of what he has laid out on his farm, he is liable in an increase of tax proportioned to a hypothetical rent then to be fixed by an assessor, and which will fall to be enhanced by the capital expended in rendering the lands productive. Thus not only is the farmer deprived of any allowance for the expense of his improvements during the time he is carrying them forward; but afterwards, when he comes to realize his capital, *it* is subjected to an assessment, in the estimated annual value of the farm—under which annual value both his capital and profits are comprehended.

It was, upon the whole, the opinion of this meeting, that, in justice to themselves, and from a regard to the agriculture of this country, which must be materially affected and injured by a continuance of the present erroneous and unequal rule of taxation,

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it is the duty of the farmers in Scotland to use their endeavours to obtain such an alteration of the law, as may provide for their being, in future, assessed according to the actual amount of the profits arising from their business; a mode of assessment which, they conceive, would impose the tax with an equal hand, and yield as much revenue as that now practised. The meeting was aware that it has been urged, among other objections to this measure, that farmers are not in the habit of keeping such regular accounts as merchants. Without acknowledging the fact on which this objection is founded, the meeting conceived, that, if it did exist, it could be easily obviated, by making *rent a criterion of profit*, in the case of those who cannot show correct accounts of their transactions.

It was therefore unanimously RESOLVED,

1. That this meeting will cooperate with the farmers in other counties of Scotland, in any general measures that may be thought adviseable for obtaining the desired alteration of the law.

2. That a copy of these minutes be transmitted to the members of Parliament for the county, and for the district of burghs with which the county is connected, with a request that they will use their influence in promoting the object of this meeting.

3. That a copy be also transmitted to the Convener of the county, requesting that it may be laid before the Landholders, at their first meeting, who, it is hoped, will support a measure in which they are so materially interested.

4. That these Minutes and Resolutions be published in the Edinburgh and Aberdeen newspapers, and copies printed for circulation.

(Signed) WILLIAM YOUNG, Preses.

NOTE BY THE CONDUCTOR.

WE take the earliest opportunity of submitting the above judicious resolutions concerning the property tax, as it falls upon farmers, to the consideration of our readers; and, at the same time, as in duty bound, earnestly recommend that similar measures for procuring relief may be adopted in every county. It is honourable to the Kincardineshire farmers to have led the way in such a business; and were their conduct to be generally imitated, a doubt need not be entertained, but that relief would shortly follow. Silence on such an important subject only serves to make the Legislature believe, that the tax, as presently assessed, is not a grievance; but were the evils arising from levying it upon rent to be clearly and distinctly described, it is impossible to think that a deaf ear would be given, or redress withheld, to those who are so burdened. N.

BRANCH

BRANCH II.

Review of Agricultuarl Publications.

Transactions of the Highland Society of Scotland, Vol. III. pp. 629. Edinburgh, Constable & Co. 1807.

Should the territory of Great Britain not be improved to the extent permitted by physical circumstances, the deficiency cannot be attributed to any want of public and private societies, established for the express purpose of benefiting and promoting agriculture in all its branches, either by conferring reward, bestowing advice, or furnishing protection to those concerned in carrying it on. These institutions may be classed under two heads. 1. The societies whose operations are not confined to a local district, but extended over the whole island, or at least a considerable part of it, such as the Society of Arts, &c. in London, the Trustees for Fisheries and Improvements in Scotland, the Bath and West of England Society, the Highland Society; and, though last, yet not least, the National Board of Agriculture. 2. The county and parochial societies, mostly established since agriculture became a fashionable art, and which are so numerous as to set calculation at defiance. In a word, no country in the known world is so liberally supplied with agricultural societies as Great Britain; and was improvement to go forward in a degree proportional with the number of hands engaged in promoting it, our island, in a short time, would wear the face of a terrestrial paradise.

We are quite aware, that several people are disposed to consider these institutions as perfectly harmless, serving in many instances as a decent excuse for a tavern meeting, and as an excellent resource for killing a little time with those who have more of that article upon their hand than they know how to dispose of. Many observations of this kind we have heard; but, without stopping to ascertain their correctness, it may safely be admitted, that there are various obstacles in the way of agricultural improvement, not to be removed by individual strength, though such may be successfully combated and overcome by the joint force of a society of persons leagued together for accomplishing one common object. Nay more, that the collision of sentiment occasioned at such meetings, serves to place the human mind in something like a state of requisition for the public good, whereby latent genius may be drawn forth, and made to act upon a stage, where otherwise it would never have appeared. Leaving

these general reflections, we proceed to examine the volume before us, which contains the Transactions of the Highland Society of Scotland (at present the most popular society in the island) since 1803; and being executed by men of celebrated talents, and well qualified for discharging the tasks respectively undertaken, claims our attention in a greater degree than the generality of agricultural publications.

Passing over the first part of the Introduction (drawn up by Henry MacKenzie, Esq.), as having nothing to do with agricultural improvement, we observe, with pleasure, an account of the several public works undertaken at the recommendation of the Society, which, when completed, must necessarily prove of lasting advantage to the inhabitants of the Highlands. We are not quite sure, however, whether the legislative regulations respecting emigration, enacted at the desire of the Society, deserve the like approbation. But be this as it may, the other objects which have engaged the notice of the Society, may, in general, be estimated as of the first importance towards national welfare. With the exceptions of the encouragement bestowed upon the compilation of a Gaelic Dictionary, the attempt to investigate the ancient Highland music, and to inquire concerning the authenticity of Ossian's Poems, we regard the labours of the Society, during the years 1804, 5, 6, as entitling them to the gratitude of their countrymen. We have made these exceptions, considering every endeavour to keep the inhabitants of the Highlands separate and distinct from their Lowland brethren, to be unwise and impolitic. The Highlands are not to be improved, unless the character and manners of the inhabitants are completely changed; therefore, every attempt to support and preserve ancient practices and customs, however well meant, must serve to retard improvement, and perpetuate the inconveniences of the present system. At any rate, what has the authenticity of Ossian's Poems to do with the improvement of the Highlands? Such an inquiry may be very fit for a learned individual, but is unworthy of the time and attention of such a respectable Society. Ossian's Poems, to be sure, whoever composed them, deserve to be admired; but with their authenticity the improvement of the country is not in the slightest manner connected.

The first essay in this volume is, *On the Natural History of the Herring*, by Archibald Drummond, Esq. This species of the finny tribe has been long considered as a valuable article, both for home consumption and exportation; and bounties to those who adventured in the catching and curing of herrings, have been distributed to an amount sufficient to have brought the whole waste land of the island into a condition approximating to that of garden

garden culture. Notwithstanding the public support lavishly bestowed, we are afraid that the herring fishery is not one step advanced since the union of the two kingdoms; therefore consider it as a trade which ought to be left to stand or fall according to its own strength. In short, the herring fishery is a business of such a variable and fluctuating description, that it cannot be forced beyond its natural bounds by bounties, however liberally bestowed. These points are not discussed by Mr Drummond, who chiefly confines himself to the natural history of the herring, concerning which he furnishes a concise account, both amusing and interesting.

Mr Drummond is for relinquishing, in some measure, the loch, bay and creek fishery, where hitherto the business has chiefly been carried on, and for prosecuting the deep-sea fishery, which he thinks has every thing to recommend it. Here we must differ with him, believing that the inshore fishery must always be most profitable, because most suitable to the genius and stock of the people concerned in the trade. Besides, the boat-fishing answers best in another point of view, because those engaged in it can, in the absence of herring, betake themselves to other branches of fishery, which cannot with the like facility be resorted to by the people employed in busses. Mr Drummond hints at rivalling the Newfoundland fishery, which, as far back as 1772, is said to have employed 25,000 men, including boys. The only difficulty which occurs to us, and we acknowledge it to be a very simple one, is, where people would be got to eat all the herrings caught under such an extension of the fishery. We believe that the market is tolerably well supplied, and at moderate rates, even as matters go; but were such an extension to take place as hinted by Mr Drummond, the trade would inevitably be ruined. Indeed it has seldom been a flourishing one, as might easily be shown were the point in the least degree problematical.

The second essay is *on Peat, its Properties and Uses*, by Mr Naismith at Hamilton. On this subject much has recently been written, and much will continue to be written, so long as peat earth forms a prominent character among Scottish soils. Mr Naismith thinks, and very justly, that the best recipe for making a peat earth soil capable of carrying crops of corn and grass, is to cover it with other earth, such as clay, loam, gravel or till, to the extent of one hundred cubic yards *per* acre, which very likely will be highly useful; but the difficulty seems to lye in procuring earth in such situations that would answer the purpose. Granting it could be procured, we have some difficulty of admitting his calculations relative to the expense, and suspect the whole to

be founded on hypothesis, and not on actual experiment. We shall make an extract, and offer a passing observation.

'I have thus attempted to examine the nature and compoſition of that unſeemly ſubſtance by which a large portion of the earth's ſurface in theſe regions is laid waſte—inveſtigating its peculiar qualities, and the cauſes of its natural ſterility. I have alſo endeavoured to ſhow that it is reclaimable, and to point out the means by which its latent fertility may be brought into action. The means preſcribed are neither intricate nor impracticable; and the advantage which would accrue from the execution is great and obvious. The expenſe of cultivation will be leſs or more according to ſituation and circumſtances: but we ſhall here, by way of illuſtration, attempt a probable computation, which, judging from experience, it would hardly ever exceed.

'The coſt of draining, levelling, and making roads, in a field of any extent, when divided by the acres it contained, would ſcarcely amount *per* acre to - - - - L. 3 0 0

Lifting, carrying, and ſpreading 100 cubic yards of earth, at 6d. *per* yard - - -	2	10	0
Firſt year's digging over - - -	2	5	0
60 bolls quicklime, with carriage and ſpreading, ſuppoſe 1l. *per* boll * - - - -	3	0	0
12 pecks ſeed oats, at 24s. *per* boll - - -	0	18	0
Harrowing and cutting tough clods - -	0	10	0
Digging over the ſecond and third year, at 1l. 6s. yearly	2	12	0
Seed for theſe two years - - -	1	16	0
Harrowing for ditto - - -	0	5	0
Graſs ſeeds to be ſown the laſt year, ſuppoſe to coſt, collecting, &c. - - - -	1	1	0
Repeated rollings the ſecond and third year, and breaking the unreduced clods, the laſt - - -	1	10	0
Thus the outlay on each acre for three years will be - L.	19	7	0

'Let us now ſee what may be the probable return. The three years cultivated crops may be reaſonably expected to be worth at leaſt, 7l. 10s. at an average each.

Inde for the three - - L.	22	10	0	
The firſt crop of graſs in hay, ſuppoſe worth	4	0	0	
The ſecond and third crops of graſs in paſture, at 30s. each - - -	3	0	0	
				29 10 0
Balance in favour of the cultivator - L.				10 3 0

'According

'* In places where, from diſtant carriage and other circumſtances, the price of lime is too high, clay, burnt in proper kilns with peat fuel, might ſupply its place. Brick duſt and lime ſeem to have ſimilar effects on graſs ground. Both kill moſſes, and promote the growth of white clover and other ſweet herbage.'

'According to this moderate computation, the cultivator is remunerated for his labour and attention; and what was heretofore a nuiſance, is converted into a valuable field. The firſt difficulties of cultivation being ſurmounted, its future culture will be leſs expenſive, perhaps, than that of any other ground; and as it will ſtill be improving in fertility, it will make more bountiful returns.

'The advantages which the public would derive from converting ſterile peat into fertile fields, are perhaps ſtill more conſiderable than the profit of individuals. I am not poſſeſſed of *data*, by which any judgment could be formed of the extent of peat fields in the Britiſh iſlands; but they abound ſo much in many places, that it would probably not be extravagant to ſuppoſe, that if the whole of that ſubſtance were cultivated to the higheſt pitch of which it is capable, it might afford proviſions to half a million of people; and if induſtry were exerted to ſpread peat, prepared as manure, over all the hard ſoils lying within two miles of the different beds of that ſubſtance, an addition of food, equally great, would undoubtedly be thus obtained. This is a ſubject worthy of the attention of the Legiſlature. Here an antidote againſt emigration is to be found. The labour requiſite to convert the peat of the country to the uſes to which it is applicable, would furniſh employment for all thoſe whom an unfeeling policy drives from ſmall farms, in order to make great ones, provided means were found to make it their intereſt thus to apply their labour.' p. 82–85.

We doubt much whether a cubic yard of earth can be digged and carried even to the moderate diſtance of three hundred yards for ſixpence; at leaſt, we know that a compound midden this ſummer coſt us more, though at no greater diſtance. It occurs alſo, that intereſt upon the outlays ought to have been added, which, in fact, is preciſely the ſame to the owner as money expended. It alſo deſerves attention, that a ſingle halfpenny is not allowed to the improver for ſubſiſtence during theſe improvements; but this is an error ſo common amongſt calculators, that it need not be inſiſted upon. We add another obſervation, and leave the inference to Mr Naiſmith. Suppoſe ſuch ſoils as are under conſideration, to be worth ten, or even fifteen pounds per acre, when in their natural ſtate, and that they require the ſum of nineteen pounds ſeven ſhillings Sterling to make them carry corn or artificial graſſes, can it be expected that they are to be improved by a common farmer, who rarely poſſeſſes longer than nine, ten, or twenty-one years, from the outſet? To expect any ſuch thing, would be fooliſh and ridiculous; therefore, the taſk of executing ſuch improvements, ſhould, in every caſe, devolve upon proprietors, eſpecially as the value of their property would thereby be doubled or tripled. It would be a pretty affair, indeed, were a farmer to double or triple the natural value of his landlord's property, and, at the end of his leaſe, have either to remove from the premiſes, or pay a rent

proportioned to the extent of the improvement which he had accompliſhed! Rural writers ſhould not only recommend what is profitable, but alſo what is practicable, otherwiſe their advices may be altogether ineffectual.

The next Eſſay, *On the Influence of Froſt and other varieties of bad Weather on the ripening of Corn*, by the late Dr Benjamin Bell, is a moſt valuable performance, and, in ſubſtance, corroborates the opinions delivered when Sir Joſeph Banks's Eſſay on the Diſeaſes of Wheat was reviewed in this Magazine. After deſcribing various experiments, which appear to have been conducted with ſingular attention, Dr Bell draws a number of appropriate concluſions, which we regret that our limits will not permit us to lay before our readers. The following ones, however, will ſhow his ſentiments on the queſtion, whether light or imperfect grain ſhould be uſed for ſeed.

'When light ſeed is made uſe of, the crops more readily ſuffer with blight and other diſeaſes; and it appears that many diſeaſes of plants, eſpecially ſuch as give riſe to the generation of inſects, are particularly apt to ſpread and communicate the contagion to plants that are weak; which, like animals in a ſtate of debility, do not ſo readily reſiſt contagion, nor the formation of thoſe vermin by which they are moſt apt to be deſtroyed, as thoſe that are ſound and vigorous.

'15. This, accordingly, ſhould be conſidered as a powerful motive for uſing only the beſt corn for ſeed, a maxim that cannot be too ſtrongly inculcated; for as the opinion, which I have mentioned prevails with many, of all ſeeds that vegetate being nearly equally fit for the production of crops, they frequently make uſe of the weak part of their corn for ſeed, and convert all the beſt of it into flour or meal; and thus, for a temporary advantage, continue to perpetuate the production of crops that are both ſmall in quantity, and of very inferior quality.

'16. For the prevention of theſe hurtful conſequences, none but the beſt ſeed of every kind ſhould be ſown: with this view, farmers ſhould not only procure ſeed that has been well ripened, but ſuch as has been well kept, and never injured by froſts, ſnows, or rains. It would alſo be much for their intereſt, to waſh the whole of their ſeed corn in ſtrong brine; not only their wheat, but their barley and oats, as well as their beans, peas, and tares; for nothing renders corn ſo fit for ſeed, as this operation; when properly done, it not only carries off all the light ſeeds, but alſo the ſeeds of a great many weeds, which cannot, in any other way, be ſo completely ſeparated from it.' p. 106, 107.

The fourth paper contains a deſcription of a lime-kiln built in 1801 by General Dirom at Mount Annan. This is a ſcientific performance; but we are not certain that the kiln therein recommended, will prove advantageous to the burners of lime. To ſave fuel is the chief improvement propoſed to be gained; and, no doubt, this is a matter of importance; but then inconveniences attend the uſe of it, which go far to counterbalance any ſav-

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ing of fuel. Some people may be diſpoſed to reckon the circumſtance candidly mentioned by the General, of his tenant having declined to work the kiln, after a trial of two years, as a deciſive proof, that it was inferior to thoſe erected upon the old plan; and were they to do ſo, perhaps they would not be far miſtaken.

The fifth Eſſay gives an account of the improvement of a tract of barren ground covered with heath in an elevated ſituation in the county of Peebles, by Mr James Allan. The only improvement we can diſcern to have been executed, was ſpreading twenty bolls of ſhell-lime on each acre of the heath after being once ploughed, though, no doubt, the elevation and ruggedneſs of the ſurface rendered theſe operations not eaſily executed.

Mr Hay's account of the improvement of a moor near Tranent, Eaſt-Lothian, is next preſented. This moor, which conſiſted of 37 acres, originally formed a part of the Winton eſtate, and had been uſed as an outfield range for time immemorial. In all probability a particle of lime had at no time been adminiſtered; therefore, it preſented a promiſing object for improvement; and, from perſonal obſervation, we are free to ſay that the meaſures uſed by Mr Hay to bring it into culture, were excellently calculated to inſure complete ſucceſs. After clearing it of whins, the ground was ploughed in November 1799; croſs-ploughed July 1800; break-harrowed in June 1801; ploughed thereafter into 15 feet ridges, limed at the rate of 60 and 70 barley bolls of ſhells (360 and 420 Winchester buſhels) per Scotch acre; ploughed a fourth time in September and October that year; encloſed with ditch, hedge and paling through the winter, and ſown with oats and graſs ſeeds in March 1802. The oat crop was good, producing at the rate of 10 bolls (60 buſhels) per Scotch acre, or 48 buſhels per Engliſh acre; and the ſucceeding crop of hay averaged 147¾ ſtones per Scotch acre, or about one ton and three hundred weight per acre Engliſh meaſure. The taking a hay crop on ſuch land ſeems the only objectionable meaſure; for it was helping to undo the improvement that had been made; and, after all, we think that graſs ſeeds would have ſucceeded better, and remained longer in the ground, had their ſowing been delayed till after a ſecond fallow. A crop of grey peas, followed by oats, might have been taken. Then, had the land been fallowed, and a ſlight dreſſing of dung applied, graſs ſeeds, accompanying barley, might almoſt, for a certainty, have been depended upon.

Mr Hay's ſtatement of outlays is given with preciſion; and he does not neglect to charge intereſt yearly on his outlays, like Mr Naiſmith, as already noticed. He avoids, however, charging any thing by way of rent, though, certainly, the ground was worth ſomething; and probably he eſtimates his firſt ploughing far too

low, at twelve ſhillings, when, in fact, it might coſt twenty. He alſo ſeems to have given his own perſonal trouble into the bargain; though, aſſuredly, the attention ſo ſedulouſly beſtowed, was deſerving of a conſiderable reward. Still, independent of theſe omiſſions, the improvement was highly beneficial; and ſhows what may be done by a ſpirited proprietor, when provided with a diſcerning and active overſeer. The fact is, if the land did not pay more than one ſhilling per acre to the former poſſeſſor, and was worth 50l. *per annum* in 1803 for a leaſe of 19 years, that the fee-ſimple of the property was increaſed from fifty-five pounds ten ſhillings, taking it at thirty years purchaſe, to fifteen hundred pounds, while the outlay on which that increaſe of value was gained, amounted to 747l. 13s. 7d., leaving a nett profit of 696l. 16s. 5d. This is the true way of calculating the worth of the improvement made; whereas, Mr Hay ſtrikes his balance, after taking a crop of oats and a crop of hay, which magnifies the profit conſiderably. N.

(*To be continued.*)

A Letter on the Nature, Extent and Management, of Poor Rates in Scotland; with a Review of the Controverſy reſpecting the Abolition of Poor Laws. pp. 38. Park, Edinburgh; Harding, London, 1807.

THE ſubject which this author undertakes to diſcuſs, is of great importance. In a country like this, where wealth and its attendant luxury abound, there muſt always be many poor; for the aggregate wealth of a nation is no ſecurity that all the individuals compoſing it ſhall be rich. Unavoidable misfortune, thoughtleſsneſs, and an abſurd attempt to keep pace with others in the career of expenſe, will be continually reducing ſome to poverty; and their miſery will be the greater in proportion to the riches of the generality. The management of the poor has become, with us, therefore, a concern of great importance, and, as might be expected, of great difficulty. Every writer on political economy, confeſſes the difficulty of the ſubject, attempts to diſcuſs it, expoſes miſtakes and abuſes, ſuggeſts reforms, and, when he has done all, we find ourſelves, ſeemingly, as far from any practical amendment of the ſyſtem as ever. The burden of ſupporting the poor is ſtill increaſing; and it may be fairly queſtioned, whether their condition is becoming more comfortable.

We muſt be underſtood to ſpeak of the Southern diviſion of our iſland; for, in no part of Scotland, can the ſupport of the poor be called a burden; and no where, we believe, is their condition

dition very bad. We are faſt following the ſteps of our Southern neighbours, however, in other reſpects; and it will be well if we take care not to follow their example in this. There ſeems to be ſome danger, at preſent, of an approximation to the condition of England in this matter; and it is this circumſtance which gives to the ſubject of the poor laws a new intereſt in this country, and renders it ſomething more than a mere topic of ſpeculative curioſity.

The ſubject embraces ſuch different intereſts, and addreſſes ſuch oppoſite principles in our nature, that the thing which renders a cool and rational inveſtigation peculiarly neceſſary, makes it extremely difficult. If we could ſuppoſe the poor to write upon it, we may eaſily conceive on what ſide they would arrange themſelves; and when the rich do it, we ought to expect a little prejudice, ariſing from intereſt, to give a colour to their ſentiments. When they, who bear no part of the burden, diſcuſs the propriety of laying it on, they are apt to think too little about its weight; and when thoſe, who carry it, ſpeak, they complain more perhaps than is neceſſary.

In ſettling the primary queſtion, therefore, whether the rich ſhould be compelled by law to provide for the poor, we may naturally expect ſome exaggerated ſtatements, ſome uſeleſs declamation, and ſome ſophiſticated reaſoning on both ſides. The narrow commercial ſpirit which calculates every thing on the principles of profit and loſs, will be for leaving all to diſcretion, leſt obligation, on the part of the rich, beget ſloth and inſolence on the part of the poor; it can ſee nothing but endleſs fraud and ceaſeleſs importunity, if the law ſhall once lend its ſanction to the claims of the needy. A miſtaken ſpirit of philanthropy, obeying the dictates of feeling rather than of judgment, diſtreſſed at the clamours of the indigent, and ſhocked at the illiberality of many of the rich, runs into the oppoſite extreme, and perceives no danger but that of the poor ſtarving through the cruelty of thoſe who ought to feed them.

The juſt courſe in this, as in all other cases, will not be found in either of the extremes; and he who ſhall be fortunate enough to discover it, muſt combine ſeveral requiſites not often to be found in the ſame individual. He muſt poſſeſs a ſound underſtanding, and not an unfeeling heart; he muſt be perfectly acquainted with all the exiſting laws in Scotland on this ſubject; he muſt not be ignorant of that monſtrous maſs of abſurdity and miſmanagement in England; he muſt be able to detect the circumſtances from which the abuſe has proceeded, and ſhow how a compulſory ſyſtem might be eſtabliſhed without leading to the ſame diſorders.

Whether

Whether this author, who has not favoured the public with his name, poſſeſſes all theſe qualifications, we are not able, from the evidence before us, to pronounce. From what we have here, we are led to conclude, that he has given the ſubject a conſiderable degree of attention, and that he poſſeſſes a liberal and candid mind. This is only the firſt of a ſeries of letters, in which the ſubject of the poor laws, as far as reſpects Scotland, is propoſed to be treated. When the author has finiſhed his ſpeculations, we ſhall make our readers acquainted with the reſult, and take the liberty, if we ſee occaſion for it, to offer our own ſentiments on this important topic.

We ſhall let the author ſtate his own purpoſe and plan.

'After conſidering the difficulties,' he ſays, 'which you have ſtated reſpecting the management of the Poor, in the pariſh where you reſide, I have thought it proper to adopt this mode of communicating to you my obſervations at full length upon every part of the ſyſtem of Poor Rates, as eſtabliſhed in Scotland. My ſituation has brought under perſonal inſpection as extenſive a view of the various forms which the Poor Laws aſſume, in the courſe of their execution, as falls to the lot of moſt men. At the ſame time I acknowledge, that though I have made diligent inquiry both into the law and the practice concerning legal aſſeſſments for the poor, and have for many years taken my full ſhare in the management of them, there is much that remains confuſed and unfixed upon this department of public police. Willing to communicate the reſult of my own experience, I am alſo deſirous to avail myſelf of the knowledge of others who have had opportunities of making obſervations upon the ſame ſubject; and it has been ſuggeſted to me, that the moſt likely method of attaining this end, would be to publiſh letters at ſhort intervals, giving time to ſuch as were ſo inclined, to contribute whatever may ſeem calculated to furniſh complete information, and preclude the embarraſſments that ariſe in the courſe of management. This ſeems to be an object of great importance, when it is conſidered, that aſſeſſments for the poor are, from cauſes to be afterwards noticed, likely 'to become more frequent every year*.' Independent of religious conſiderations, it is likewiſe a very intereſting concern to every friend of his country, that the poor ſhould have no juſt reaſon to complain, and that the labouring claſſes, who, from their condition, are diſpoſed to ſympathize with the indigent, ſhould not be induced, by any inattention or neglect, on the part of their ſuperiors, to regard them with diſlike or ſuſpicion. Some years ago, complaints were made by ſeveral miniſters of the Church of Scotland, that the poor of their pariſhes were neglected†; and in that part of the country where I live, the number of beggars, ſince the late years of ſcarcity, has been gradually

* 'Appendix to Mr Whitbread's Speech on the Poor Laws, by the Rev. Sir Henry Moncrieff.'

† 'Statiſtical Account of Scotland.'

dually increasing; and this year they seem to exceed all the preceding. These, and a variety of other circumstances, which will occur in the sequel, appear to me to call for a more complete view of the law and the practice relative to the poor in Scotland than has yet been given, or at least than has been contained in any one publication.

'There are three general heads, under which every thing that can be said upon this subject may be arranged. 1. The statutes, with the construction given of them by eminent professional men, and particularly by the decisions of the Supreme Court. 2. The mode of managing the assessments, and all the concerns of the poor, according to general practice, where the statutes or decisions have not made any distinct provisions. 3. The expediency or inexpediency of Poor Laws, as a question of political economy.

'According to the plan I have adopted, for communicating all that I have learned by reading or practice, or may derive from the communications of others, I cannot promise to follow the arrangement now stated so perfectly as may be expected. At the close of my letters, however, this defect may be fully remedied, by such a distribution of the contents as shall bring within a short compass a clear view of every thing contained in them.' p. 3—5.

At the end of this letter, the author solicits the correspondence of those who are qualified to aid him in elucidating the subject.

'It is the intention of the author to continue the discussion of this important subject. He therefore solicits *communications*, addressed (*post paid*) to the publisher; and will expect his correspondents to be frank and explicit. Such as are approved of, will be inserted in an Appendix.' p. 38.

As we are anxious to see the subject completely discussed, we wish the author all success, and shall be happy that he receive such aid as may enable him to render his plan perfect. With regard to the execution of this part, we shall only remark, that his examination of the doctrine of Mr Malthus, in strict conformity with his own plan, as well as in regard to propriety of arrangement in general, would have been better left till he had finished the inquiries to which he proposes to confine himself.

J.

Essays on the Natural History and Origin of Peat Moss: The peculiar Qualities of that Substance; the Means of improving it as a Soil; the Methods of converting it into a Manure; and the other Economical Purposes to which it may be made subservient. By the Reverend R. RENNIE, Kilsyth. Edinburgh, Constable & Co. London, Murray. pp. 283.

PHILOSOPHERS are not at one with regard to the nomenclature of soils. It is plain, however, so far as regards practical and useful

useful purposes, that soils may be classed as clay, gravel, sand, and peat earth; and that to one or other of these soils, the numerous varieties to be found in the British isles are less or more allied, though the degree of affinity betwixt them is, in many cases, difficult to be ascertained. Loam has generally been treated of as an original soil, though we are disposed to view it as an artificial one, produced by the application of calcareous matter and animal and vegetable manures. Even peat earth, may be converted into a soft black loam, and rendered fertile and productive by different processes; such as draining, liming, and mixing it with clay or any other soil, which has a stouter body, or contains a greater portion of vegetable substance. From these circumstances, a degree of confusion prevails respecting the nature and properties of several soils, which renders every description of them more abstruse than at first sight might be expected. Even the admixture of surface and substratum by deep ploughing, augments the confusion, and serves to produce a change in the original soil, of considerable magnitude.

It is only with one of the varieties of soil, however, which we at this time have any business, namely, peat earth, or moss; but when it is considered, that this variety forms the surface of at least one sixth of Great Britain, the subject will appear of such importance as to call for the most minute and serious investigation. After all, we are not sure whether peat earth should be considered as a primary or original soil: we are rather disposed to view it as an artificial one, and produced by certain substances deposited on the surface of the earth. On these points philosophers are greatly at variance, entertaining such discordant opinions, that we are much inclined to think, few of them understand the nature and properties of moss, or are acquainted with its origin and history. By one we are told, that peat earth is a primitive soil, and of antediluvian origin. By another, that it is a kind of growing vegetable, or a plant *sui generis*, which continues to grow and increase to an immense magnitude and indefinite age, and may continue growing and increasing, till, like the lean kine of Pharoah, it swallows up and devours all other soils that are in its neighbourhood. By a third, we are informed, that it proceeds from ligneous and aquatic plants, brought into action by the destruction of the immense forests which anciently abounded over all Europe. Our opinion leads us to adopt this hypothesis, because it is supported by the appearance which peat moss generally presents, and by facts which may be gathered concerning the former state and condition of the places where moss is now most predominant. It is indeed truly wonderful, that so little should be known upon a subject confessedly of the greatest importance,

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not only to the agriculturists of Britain, but also to those of the whole world. Under this impression, we examined the essays now under consideration with much anxiety, and can safely state, that few writers have treated of the origin of moss in a more luminous manner. The author (Mr Rennie) seems to be free of prejudice, attentive to minute inquiry, and disposed to gather knowledge from every source within his reach, or which promised to yield the information he was in search of.

Mr Rennie has presented us with two essays on this important subject. The first is on ligneous plants, wherein he shows, that forests abounded in the north of Europe two thousand years ago; and then points out the causes, or means, which brought about their destruction. In the second essay, he treats of aquatic plants as contributing to the formation of moss; and it must be acknowledged, that his deductions are in strict conformity with his premises. In short, we have perused many papers on peat earth, or moss, but from none of them have experienced so much satisfaction as from the essays of Mr Rennie.

The tenth section of the second essay contains the author's general conclusions, all of which are clear, distinct, and well expressed. The first of these conclusions is, that moss is of vegetable origin. The second, that all moss is either composed of ligneous or aquatic plants; and the third is so much to our mind, as to encourage us to lay it before our readers.

'*Thirdly*, From the above account we may conclude, that many regions now covered deep with moss, were at one period arable lands, at another forests, at a third lakes.

'We may still trace these changes, and mark their progress, in many mosses. For instance,

'1. Under some mosses the marks of the plough, and even ears of corn and other grain, with various utensils of husbandry, have been found.

'These are clear evidences that, at one period, the above surface was a ploughed field.

'2. In these ridges a vast variety of trees are found, some standing erect, others fallen prostrate, but all with their roots fixed in this subsoil of arable land. This is a proof that, at a second and subsequent period, the surface was covered with a forest.

'3. These trees are sometimes found immersed in moss of a semiliquid state, to the depth of 10, 20, or 30 feet; and aquatic plants, such as flourish in water, may be still traced through all its depth. Nothing can be a clearer proof than that this, at a third and subsequent period, has been a lake.

'And in this stage some lakes are still found. Lough Neagh is an instance of this. Mr Smith, in his account of it, mentions, that part of this loch was formerly a forest; that this is the common tradition among

among the inhabitants of that diſtrict; that it is probable, for much wood is found in it; that this wood is ſunk in a kind of pulpy moſs called mire, black at the bottom of the lake. If ſo, it will naturally be aſked, why the whole loch has not been converted into moſs? It is impoſſible for me to aſſign the reaſon. Perhaps the great extent of the ſurface, and the agitation of the waters by the winds, may be unfavourable for the growth of thoſe aquatic plants which contribute to form moſs; or, perhaps, the petrifying quality of the waters may be unfavourable for this purpoſe. If the aquatic plants above deſcribed grow in any ſheltered bays of this loch, and if they are there accumulated, they may ultimately be converted into moſs. This I mention, merely to excite the attention of the intelligent part of the inhabitants of that diſtrict to the ſubject.

'4. It is certain that, in other places, many lakes have been, by the above means, filled up and converted into moſſes.

'5. And it is equally certain that, at a ſubſequent period, theſe moſſes, by conſolidation, may have been converted into meadows, and afterwards into rich arable lands. Moſt of the fertile plains along the banks of rivers, in the north of Europe, are of this deſcription; they, of courſe, generally lye on a ſubſoil of moſs.

'So that it is probable that many of theſe have, in the courſe of ages, undergone all the above changes; from arable lands to foreſts, from foreſts to lakes, from lakes to moſſes, from moſſes to meadows, and from meadows to their original ſtate of arable land; I call it their original ſtate, but I think it probable that, before they were firſt cleared and cultivated, they were originally covered with wood.

'It is natural to ſuppoſe, that many low levels, covered with wood, have been converted into moraſſes. The trees, by falling into decay, and ſtemming the courſe of rivers, may have occaſioned ſuch a ſtagnation of water as to cauſe this change. It is equally natural to ſuppoſe, that ſuch low levels may have been converted into deep lakes. The mouths of rivers may have been ſo ſtemmed, by accidents ſuch as I have deſcribed, p. 51 and 52 of my firſt eſſay, as to raiſe the waters in the valley to a level above all the plants and trees that originally ſprung up and flouriſhed in it. If this valley was of ſmall extent, and the lake formed in it favourable for the growth of aquatic plants, the whole waters may have been firſt covered over with a matting of theſe. By conſolidation, and the continual acceſſion of vegetable matter, the whole lake may have thus been converted into a moſs.

'All thoſe moſſes which are deep, and contain trees, ſome ſtanding erect and others proſtrate on the original ſubſoil, and eſpecially thoſe which contain a ruſhy, reedy peat above theſe trees, and a black compact moſs above this, ſeem to me to have undergone theſe changes; and the vaſt extent of moſſes of this deſcription over Europe, probably originated in this way. It were ſuperfluous to enumerate inſtances of this. I ſhall only ſpecify two; the firſt is Low Modena, which ſeems to have undergone all theſe changes; the ſecond is the bog of Monela in Ireland, which ſeems to have been ſubjected to a ſimilar ſucceſſion. Ramazini

mazini deſcribes the former; Carr, in his Stranger in Ireland, delineates the latter.

'The ſtratification of the vicinity of Modena is ſomewhat ſingular. 'The ſurface of the valley is now a rich arable field. At the depth of 14 feet below this, it is ſaid that the rubbiſh and ruins of an ancient city were diſcovered. Paved ſtreets, and pieces of moſaic work were found at this depth: below this the earth is ſolid, and ſeems not to have been moved: lower down is a looſe, moiſt ſoil, mixed with vegetables; and, at the depth of 26 feet, entire trees, ſuch as filberts, with nuts, and a great quantity of branches and leaves have been dug up. At 28 feet deep a ſtratum of ſoft chalk, mixed with ſhells, was diſcovered. This ſtratum is 11 feet thick. Below this, at the depth of 40 or 50 feet, there is to be found the ſoil of a low marſhy country, full of ſedge, reeds, ſhrubs, roots of trees, nuts, ears of corn, leaves of trees, branches, and boughs.' He even deſcribes the ſpecies of wood. He ſays, that oak, elm, walnut, aſh, and willow may be diſtinguiſhed. 'Some of theſe trees are broken down, others ſtand ſtill upright as they grew. Among theſe are found old Roman coins, marbles, ſtones ſquared and cut by the hands of men. Each tree is found on the ſoil moſt adapted to its production. The fir roots are faſtened in the ſand, the oak in the clay.'

'The whole of this valley, he ſays, was a lake in the reign of Julius Cæſar. The ſurface is now drained and conſolidated, and converted into arable land.

'It ſeems obvious to me, that this valley has undergone all the changes above deſcribed; at one period it has probably been arable land; hence the ears of corn, &c. which have been diſcovered: ſubſequent to this, it ſeems to have been overgrown with wood; hence, the trunks and roots of trees: this wood ſeems afterwards to have been converted into a moraſs; hence the ſedges and reeds, &c. which are found: this moraſs ſeems to have been after this conſolidated by alluvion; hence the ſtratum of ſoft chalk and ſhells.

'Above this, another generation of a foreſt ſeems to have ſprung up; hence the other tier of branches and leaves of trees. This ſecond generation ſeems to have undergone the ſame fate with the firſt; the moiſt ſoil mixed with vegetables above it, ſeems to be the remains of the marſhy plants that muſt have ſprung up after this foreſt was alſo converted into a moraſs.

'This moraſs ſeems again to have been conſolidated, probably by alluvion; hence the ſtratum of ſolid earth: on this the city ſeems to have been built; hence the paved ſtreets, &c.: the 14 feet above this ſeems to have been formed after the city was overwhelmed with ſome inundation.

'Whether the lake that exiſted on the ſpot at the age of Julius Cæſar was thus formed, it is impoſſible to decide. If ſo, however, the 14 feet of ſolid ſoil above this city, muſt have been formed ſince that period.

'That many low lying vallies in different parts of the world have undergone

undergone similar changes, is not only probable but certain. The mosses of Ireland exhibit similar proofs of this: in digging deep into these, recumbent forests upon forests are found, with a layer of earth between.

'This leads me to notice the other instance mentioned by Carr, in his Stranger in Ireland: He says, "that the bog of Monela is not far from the bog of Allan: stumps of trees are still visible on the surface of the former; under these lies a stratum of turf 10 or 15 feet deep: under this, a tier of prostrate trees is discovered; beneath these another stratum of earth is found of considerable depth: and below this a great number of stumps of trees are found, standing erect as they grew. Thus, there is a succession of three distinct forests lying in ruins, one above the other."

'He says, "Some of these mosses have been perforated deeper than 30 feet: at the bottom of many of them, he observes, arable land has been discovered, bearing the marks of the plough, and formed into regular ridges."

'These fragments of the natural history of mosses, may furnish us with some faint ideas of their origin and formation. If we were to discover the hulk of a ship, or even a few beams, sunk in the ocean, we would be at no loss to say, that these were the remains of a wreck. The size of these beams might easily lead us to distinguish between the wreck of a frigate and a first-rate man of war. The state of preservation in which these are found, might give us some idea of the period at which the wreck happened.

'It is precisely so in examining the history and origin of peat mosses. The ruined forests found in these leave us no doubt that they have been partly formed of the wrecks of these. The size and species of trees lead us to conclude what must have been the age of the forest when it fell into ruins. The state of preservation of these trees, and the depth of soil formed above them, may give us some faint idea of the period at which they fell. The remains of aquatic plants, reeds, and rushes, &c. found above them, give us likewise an idea of the cause of their ruin; and the stratification of the soil exhibits a view of the changes it has undergone in the lapse of ages.'

In these essays, Mr Rennie has only endeavoured to ascertain the materials of which moss is composed, and to show how those materials have been accumulated together. But he promises, at an early period, to lay before the public a series of other essays, respecting the uses to which moss may be applied; a subject certainly deserving of the most sedulous investigation. If these future essays are written with the like spirit as animate those before us; if they are executed with similar judgment, and directed by practice, not by theoretical speculation, then we may expect to receive more satisfactory information about the nature and properties of moss, and the economical purposes to which it may be applied, than has hitherto been communicated by any other writer.

N.

BRANCH III.

Agricultural Intelligence.

Since the ſecond week of November, the weather has been ſingularly variable, and, in ſeveral reſpects, more unfavourable to live ſtock and field work than any ſeaſon within our remembrance. The iſland has been often viſited with wetter winters, occaſioning the ground to be in an improper condition for receiving the plough, but has ſeldom experienced ſuch ſevere black froſts as during the preceding three months, the conſequences of which are not yet ſufficiently aſcertained. Both wheats and clovers have ſuffered conſiderably; many turnips are rotted; and it is to be doubted that the freſh ones remaining will ſoon get into the like condition. Leſs wheat has been ſown than uſual; and the backwardneſs of the weather will prevent that deficiency from being made up, by a ſpring ſeed-time, to the full extent intended. Ploughing is, in many counties, far behind, and provender becoming ſcarce in all. The ſeverity of winter occaſioned a greater degree of waſte than would have happened under more favourable circumſtances; and, ſhould the ſpring quarter prove adverſe and inclement, probably there will be a great deficiency of dry food in many diſtricts long before the graſs ſeaſon arrives.

Markets have hitherto been fully ſupplied with grain, though there is every reaſon to believe that a degree of ſcarcity will afterwards be felt, ſufficient to cauſe a conſiderable advance of prices. Wheat has had a dull ſale through the whole winter, and at this date may be conſidered as inferior in value to peas and beans. Fat cattle and ſheep, not very plentiful, have ſold tolerably well; but, as turnips are nearly conſumed in many places, an advance of price may be looked for. Taking the value of produce in a general point of view, the reſult is unqueſtionably againſt the farmer, as might eaſily be demonſtrated were this the proper place.

This Magazine being the only periodical publication in the iſland which admitted a diſcuſſion concerning the property tax, or deſcribed its pernicious effects upon the tenantry, it gives us pleaſure to remark, that the ſubject has been taken up by the landed intereſt, and farmers of ſeveral counties, whoſe petitions will no doubt meet with that attention from the Legiſlature, which every man, who has attentively reflected upon the ſubject, muſt acknowledge they are juſtly entitled to. The reſolutions of the Kincardineſhire farmers are inſerted in a preceding part of this Number, and certainly do much honour to thoſe who brought them forward. We cannot help obſerving, that a ſpark of that public ſpirit which influenced our original correſpondent in that county (unhappily now no more) ſtill continues to animate his friends and neighbours; and we ardently wiſh that the tenantry of other counties would follow up ſuch a laudable example. It is not the efforts of one,

two, or even half a dozen of counties, that will procure an alteration of the tax. No. The criterion of rent is ſuch a convenient one to the tax-gatherer, that it will not be ſurrendered unleſs a ſtronger oppoſition, than hitherto has appeared againſt it, come forward before the Legiſlature. It is very well to ſpeak of the wiſdom of Parliament, and to expreſs our ſteady truſt that all their meaſures will be guided to promote the public welfare. Theſe are ſound doctrines in the abſtract, though not applicable to the buſineſs under conſideration. If the landed intereſt, whether proprietors or tenants, ſit with their arms *a-kimbo*,—if they remain ſilent, and without complaint,—if they patiently ſubmit to the property tax, without ſaying that they are thereby aggrieved;—we ſay, if this paſſive ſtate is preſerved, Parliament muſt neceſſarily infer that the tax is a fair and equitable one, and determine not to change the rules adopted for carrying it into execution, merely becauſe two or three ſolitary petitions are preſented for relief. The ſubject is of importance, and undoubtedly merits far more conſideration from the landed intereſt than hitherto it has obtained. At preſent, the tax chiefly falls upon the tenantry; but ultimately, it muſt be ſuſtained by proprietors,—a propoſition evident to the dulleſt capacity.

SCOTLAND.

Weſt Stirlingshire Quarterly Report.

The time is now come when the farmer can eſtimate, with accuracy, the injurious effects of the late unpropitious ſeaſon. After a wet, and a cold ſpring,—after a ſummer, at firſt of exceſſive drought, and afterwards of inceſſant rain,—after a harveſt late in its arrival, and interrupted prematurely by the ſeverities of winter, it is not to be expected that the crop ſhould be either good in quality, or great in quantity. There does not appear to have been enough of climate for bringing to maturity thoſe fruits which uſually ripen in this country. Of this, any perſon may be convinced, from obſerving the berries of the bramble, which ripen about the ſame time with oats, ſtill hanging neglected by children in the hedge rows, and wearing the ruſſet appearance which they ſhould have had in ſummer. In the upland diſtricts of this county, a great part of the corns had not paſſed that ſtage. The untimely froſts in the beginning of September irremediably injured both the ſtraw and the ear. When the crop was cut down, the injury was aggravated by the inceſſant rains which it experienced while ſtanding in the fields; and when, at length, it was carried home, it was, in ſome expoſed ſituations, found ſo exhauſted of glutinous matter, that, on the leaſt motion, the corn, the chaff, and even the footſtalk, fell from the ſtraw to the ground. In all the upland diſtricts, and even to the ſuburbs of Glaſgow, the crop was not all harveſted till the middle of November. During ſome occaſional good days at the beginning of that month, the potato crop was neglected, and the whole attention directed to the corns. The latter

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was at laſt ſecured; but the former, from the unexpected appearance of froſt, and from its uninterrupted continuance for a month, was found, at the return of thaw, ſo completely deſtroyed, as in no inſtance to compenſate the bare trouble of digging it out of the ground. Barley was at firſt bought eagerly, and ſtill finds a good market. It is ſold at every intermediate price from 25s. to 35s. per boll. Although little injured by the early froſts, yet, from mere defect of climate to bring it to full maturity, it is found about 10 per cent. ſpecifically lighter than that of laſt year. Oats, as being later in ripening, have ſuffered more ſeriouſly, and ſhow but indifferently, either as to quantity in the barn, or quality in the mill. Few ſamples return ſixteen pecks of meal per boll of grain; and in high ſituations, the average return will not exceed ten or eleven pecks,—while, in common years, it amounts to fourteen or fifteen. Meal is ſelling at 30s. per boll; and ſeed oats already fetch the ſame price. Of late, there has been rather a degree of dulneſs in the ſale of grain. This ſeems merely to be a temporary effect of the great quantities which are uſually thraſhed out and brought to market at this ſeaſon. When it is conſidered that peas and beans have generally failed, that oats and barley are rather defective in quantity, and in moſt places inferior in quality, it is very probable that prices will rather advance than decline. It is admitted that every corn crop was plentiful in England and Ireland; but importation into Scotland muſt, from the ſtate of politics, be limited to what can be ſpared by theſe countries; and they have not been in the habit of exporting much for a ſeries of years. It is known that ſix thouſand bolls of grain have been of late brought into the Clyde in the courſe of a week; but this is only a partial remedy to a general calamity.

An evident effect of the dearneſs of proviſions, is a conſiderable reduction in the price of labour, particularly in the wages of ſervants. The latter have been gradually riſing for the laſt ſix years, and latterly amounted to from 12l. to 15l. for a ploughman in the half year, all around Glaſgow. The high price of manufacturing labour allured all the youth in the vicinity into the vortex of that city. The huſbandman, abandoned by the indigenous labourers of the diſtrict, was obliged to draw upon the population of the Highlands, and to raiſe the wages of his farm-ſervants ſo high, as to bribe the natives to deſcend from the Grampians. From the preſent ſtagnation of trade, ſo many manufacturers have been laid idle, that, even after ſupplying all the neighbouring counties with militia ſubſtitutes, they have regorged upon the country in conſiderable numbers. From the very defective crop of the Highlands, an unuſually great number of people from that quarter, from the difficulty of ſubſiſting at home, have offered themſelves for ſervice in the Low Country. The abundant ſupply of labourers has naturally effected a diminution of their wages. Thoſe of men-ſervants have declined about 15 per cent. Women are ſtill cheaper. At the cloſe of the great hiring fairs on the ſkirts of the Highlands, maid-ſervants could be procured at about one half of the wages of the preceding year.——*1ſt February.*

Letter from a Farmer in the Upper Ward of Lanarkſhire, Feb. 8.

'THE weather has been very unfavourable in this high diſtrict, the froſt having ſet in earlier than uſual, and retarded field-labour conſiderably. Turnips ſuffered much by the froſt, few of them being ſtored this ſeaſon; which has occaſioned many fattening cattle to be prematurely carried to market in a half fed ſtate. The demand from Glaſgow was not ſo great as uſual, and prices have not exceeded 8s. per ſtone Amſterdam weight, ſink. The corn crops have turned out poorly; oats in particular, yielding only from eight to twelve pecks of meal per boll, being greatly damaged by the froſt in September; and peas and beans will not return the ſeed that was ſown.'

Letter from a Gentleman in Perthſhire.

'I HAD a letter from Colonel Graham, dated Holkham, 5th inſtant, in which he mentions a practice in uſe there, of giving to ſheep (during a ſtorm of ſnow) the branches of fir to eat inſtead of hay; and adds, that, in the morning of the above date, (a deep ſnow being on the ground) quantities of fir branches and hay, had been laid down on the lawn in front of the houſe, at Holkham, in order to ſhew him the experiment, and that the ſheep left the hay and took to the fir branches; this he wiſhed to have tried here, and that as well with the branches of ſpruce as thoſe of Scots fir, the latter being only what he ſaw uſed at Holkham. The fall of ſnow we had on Sunday was favourable for the experiment, and we laid down yeſterday to the ſheep, both ſpruce and Scots fir branches, both of which they ate without any reluctance. We again put down to them this day, both branches and hay, in order to try which they would prefer, and they appeared to be equally as fond of the former as of the latter, eating indiſcriminately of either. The ſheep did not appear in the leaſt ſhy, and I have no doubt, from their readineſs to eat them at ſo early a period of the ſtorm, that this practice muſt be of conſiderable advantage during a long ſtorm, particularly where there is much *young fir* wood.'

Weſt Roſsſhire Quarterly Report.

IN reporting on the huſbandry of a diſtrict entirely highland, the objects which preſent themſelves are few, and cannot be very intereſting to mere agriculturiſts. Here the efforts of agriculture are feeble, limited to a few acres, and thoſe under the worſt ſyſtem of management. This will appear evident, when ſtated, that it is no uncommon thing for many of the black cattle of the north-weſt Highlands, to periſh for want of winter food. But it is well obſerved in ſome of your uſeful pages, that the improvement of a country is in general more retarded by moral than natural cauſes. Our climate is milder than in the ſame latitude on the eaſt coaſt. The quantity of tillage might be greatly increaſed, drains might be formed at a ſmall expenſe, and irrigation executed with little labour. But the diſtrict alluded to has languiſhed under the effects of feudaliſm; from which it is ſuppoſed no virtue ever ſprung,—unleſs ſavage courage, falſe courteſy and magnanimity, and ſplendid ſpoliation, ſo elegantly adorned by Oſſian's poems, ſhall be eſteemed

eſteemed ſuch. Perhaps it may be ſo amongſt poets and chieftains; but farmers eſtimate virtue by quite a different ſtandard. The moral turpitude of the feudal ſyſtem ſtill remains; the adminiſtration of our laws is tainted with it; and domeſtic policy, as well as rural economy, are polluted by the dregs of this barbarous ſpirit. If any one ſhall think proper to take exception at theſe obſervations, the writer hereof ſhall avow himſelf ready to condeſcend on particulars.

A great quantity of rain always falls in this diſtrict; but the weather, during the four months preceding, has been uncommonly variable. There have been ſeveral ſtorms of ſnow, with keen froſt. Fortunately for cattle and ſheep, theſe did not continue long; and the ſnow, it is believed, throughout the diſtrict, was never, at the ſame period, more than ten inches in depth. Nevertheleſs, much apprehenſion is entertained for the ſafety of cattle. Hand-feeding has been reſorted to ſparingly. From the dull ſales of cattle laſt year, an extra quantity remains in the country; and from the very ruinous and unfavourable harveſt, a great proportion of the natural or meadow hay (for we have as yet little elſe) was deſtroyed; and the corn crop ſhared the ſame fate. In theſe circumſtances, fears are entertained, which Low-country, or tillage farmers, ſeldom feel. Their ſources of income are more various, though more expenſive.

The only articles of export in this diſtrict, which deſerve to be noticed, are ſheep, wool, black cattle, herrings, and kelp. The introduction of ſheep, deſervedly becomes more univerſal, which are generally of the black faced breed; though it is ſuppoſed the Cheviot kind would anſwer well on many peninſulated ſituations, where ſnow never lyes any conſiderable time.

Black cattle, the herring fiſhing, and potatoe crop, are the articles on which the great body of the population depend. The fiſhing failed, and the potatoes were prodigiouſly hurt by the early and ſevere froſts. In ſhort, a more calamitous and diſaſtrous ſeaſon than this has been to the north-weſt Highlands, cannot well be imagined.

Kelp, laſt ſeaſon, was let to manufacturers at 3l. 5s. per ton of *twenty-one hundred weight*. The expenſe of manufacturing was about four guineas per ton. The article was ſold by exporters at about 12l. Sterling per ton of 20 cwt., which would yield a large profit after paying all charges. Of courſe, the rents offered by manufacturers are about 20s. higher per ton for the kelp of this ſeaſon. It is reported in this country, that Liverpool, Leith, and Greenock merchants, to whom the kelp is generally ſold, have been in the practice of ſending that of the worſt quality to the London market at a high price, and retaining the beſt for their own uſe. It is hoped the London dealers are now convinced, that kelp of the very beſt quality is manufactured on the Weſt coaſt and Hebrides.

Turnips are beginning to be cultivated here on a ſmall ſcale, and they have been damaged only in an inferior degree during winter, notwithſtanding the frequent ſucceſſion of froſt and freſh.

It would be ungrateful in a Highlander to close this retrospect, without acknowledging the beneficent exertions of Government in giving employment to a numerous population in the national improvements of canals and roads. In addition to the numerous roads made and forming under the auspices of Government, in the adjacent counties, one has been recently advertised for contractors, from the ferry of *Kylchakin* to *Dingwall*, a distance of sixty miles. This will open a communication through a country, 'over which,' in the pompous language of Johnson, 'no wheel ever rolled.' And it deserves notice, that Hugh Innes, Esq. of Lochalsh, merits the best acknowledgements of the county at large, for his spirited and liberal contributions, in effecting, with the assistance of the parliamentary commissioners, the commencement of the first line of road in this county, under the late act of Parliament for making roads and bridges in the Highlands.——*11th February.*

Upper Annandale Quarterly Report.

THERE is a visible depression on the minds of the farmers in this district. The season, though not absolutely calamitous, has been very unpropitious to them. Great injury was sustained by the wet harvest; and the early and severe winter following, has added to their distresses; which, by the alteration of the times, have risen to a serious height. It is not denied, that some of them would renounce their tacks, if they could get quit of them, and dispose of their stocks.

The operations of the field have been much interrupted and retarded, with frosty and wet weather in succession. The turnips were a failing crop, and are gone, some time ago, by the severe frosts; the Swedish turnips have been greatly damaged by hares. Potatoes were bad and scarce, and some of them have not been got up at all. The pastures were greatly injured by the severe early frosts: dry food is not plentiful, neither is it good, excepting the sown hay. Young cattle are so doubtful an article at present, that several farmers appear to think, that stirks, or young cattle, not in good order, are hardly worth acceptance, if they should even be offered gratis.

Oats have turned out unproductive, and good prices are offering. Barley (owing to the high duties of malt, which interrupt the natural use of this grain) is dull of sale. Fat stock alone maintains a full price, and has become scarce.—— *13th February.*

Aberdeenshire Quarterly Report.

WINTER in this district has been almost one continuation of frost, with slight falls of snow. The remainder of the crop, was scarcely *yarded* when the stormy weather set in, which has hitherto proved exceedingly adverse to field-work of every kind.

The provender, which was always considered as scanty and deficient, and which was rendered much more so from the badness of the harvest, has been consumed much quicker than in ordinary years, from the hardness of the winter, and its early commencement; while the greatest part of the work remains yet to be performed. Should the storm, which at present is greater than it has been at any time before, even go off soon,

ſoon, it may be fairly ſtated, that the ſeed-furrow will not reach its ordinary breadth here this ſeaſon, and that, at all events, a great part of it muſt be very late.

Such turnip as remain in the field, the yellow excepted, are much hurt by the ſeverity of the ſeaſon, and will not ſtand out the uſual time. Fat cattle ſell readily at 8s. to 8s. 6d. per ſtone, ſink. Sheep have been carried on with ſome difficulty and conſiderable expenſe in the lower parts of the county. This difficulty and expenſe muſt have been increaſed in higher and more expoſed ſituations. —— *17th February.*

Letter from a Gentleman in Roſsſhire, February 14.

'THIS county is in a lamentable ſtate. Provender in the Highland diſtricts is nearly exhauſted, and hundreds of black cattle have been ſlaughtered and ſalted. Should the preſent adverſe weather continue long, the greateſt part of the cattle and ſheep in the Weſtern or Highland diſtrict of this county muſt periſh. But, what is worſe, the people are beginning to feel ſeverely the want of potatoes and meal; of the former, there is ſcarcely one to be got, and the latter is ſelling at 34s. per boll of nine ſtones. Notwithſtanding this ſcarcity, diſtillation goes on briſkly, and will continue to do ſo while the wreaths of ſnow defy the gauger.'

Banffſhire Quarterly Report.

THIS quarter may be reported as one of the moſt adverſe for the operations of the farmer that has been experienced for many years. Exceſſive wetneſs in the firſt inſtance, and the frequent recurrence of moſt intenſe froſt, which ſet in at a much earlier period than uſual, has kept labour in a very backward ſtate. In few inſtances is there much ploughed for ſeed, and in the interior there is little done. Although a good deal of land was prepared for wheat, ſcarcely any could be got ſown till about the latter end of December, when a few days of milder weather admitted ſome fields to be laid down; but, from the ſtate of the weather ſince, it is to be apprehended with little chance of ſucceſs, unleſs in very dry ſituations.

The ſtack yards are diminiſhing to a degree rather alarming, eſpecially when it is conſidered how much work remains unexecuted. In the upper diſtricts of the county, bear and ſtraw has ſold as high as 3l. Sterling per boll of 128 Scotch pints; and oats 45s. ſame meaſure. Notwithſtanding of the great ſlaughter which took place in the autumn, and conſiderable ſavings made by ſubſtituting *furze*, and the tops of heath for ſtraw; yet there will be great difficulty in bringing the remaining ſtock of cattle to graſs, if the ſpring is not uncommonly favourable.

The butcher market has hitherto had a full ſupply, and beef ſelling as low as 2½d. and 3d. per lib.; but the young cattle are now become too lean for ſlaughtering, and good beef ſells from 6d. to 7d. p. lib. From the want of turnips, few cattle were put up to fatten, and the ſeaſon has been unfavourable for that branch; ſo that, if the uſual conſumpt prevails in the ſpring markets, a ſcanty ſupply may

be expected. Some lots of good three-year old ſtots will be found in the uſual condition. Hay ſells at 18d. per ſtone of 20 lib. Dutch, but is not plentiful. Potatoes ſcarcely make any part of the human food; and there will, no doubt, be difficulty in getting ſeed preſerved. The failure of this uſeful eſculent has added greatly to the diſtreſs of the poor, whoſe numbers are daily upon the increaſe. Labour has not come down ſo much as might have been expected, conſidering how many manufacturers are out of employment.—*Feb.* 17.

Letter from a Gentleman in Ayrſhire, February 17.

'From the date of my laſt letter, the weather continued extremely unfavourable for a long tract of time, inſomuch that the month of November was far advanced before the harveſt operations were completed. Near a week of dry weather intervened, which preſerved the crop from total deſtruction; and it was got ſecured, though with conſiderable loſs of the beſt of the grain ſhaking off in handling, from the long continued wetneſs. The whole hands of the county being thus employed in ſecuring the corn crop, they were prevented from taking up the potatoes in due time; and a ſevere froſt having come on before that part of the labour of the field was got accompliſhed, a general loſs was ſuſtained. Many hundreds of acres of them were not attempted to be raiſed, but got leave to remain in the ground to ſee if they would recover by the ſucceeding thaw. Thoſe that were left thus in the ground, though ſcarce yet fit for the uſe of man, are ſerviceable for cattle, while thoſe digged during the time of the froſt, are uſeleſs to both. Since the concluſion of harveſt, we have had a courſe of the ſevereſt weather ever remembered in the winter ſeaſon. High gales of wind, with torrents of rain, ſevere froſts, with immenſe falls of ſnow, have alternately divided the ſeaſon among them, with very little intermiſſion of mild or moderate weather. Field operations, in ſuch a ſtate as this, could ſcarce be performed, at leaſt not to any purpoſe; and, it is much to be dreaded, that the new ſown graſs, as well as wheat, has been greatly injured by ſuch a long continued alternation of froſt and thaw. The ſcanty crop of turnips, together with the depredations committed by the froſt on the potatoes, have greatly injured the feeder; and the almoſt total failure of the bean and pea crop, has occaſioned a conſiderable riſe in the price of hay. Cattle markets, which, at the end of laſt ſeaſon, declined as much here, as every where elſe, are at preſent completely ſtationary. Few ſales are made in this diſtrict at any time, at this early ſeaſon; but any few that might at preſent require them, are afraid to purchaſe cattle, on account of the ſcarcity of keep, or rather the fear of ſcarcity. Upon the whole, this has been an unfavourable ſeaſon for farmers, and farming operations. But, notwithſtanding all this, farmers, like other good chriſtians, forgetting the things that are behind, look ſtill forward with hope and joy. Nothing will deter or diſcourage them. The rage for land continues as great as ever; and ſome that has lately been diſpoſed of, ſet at ſuch rents as the very beſt ſeaſons cannot afford. There is ſurely an infatua-

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tion in the caſe, at leaſt ſomething that cannot well be accounted for. The property tax is univerſally and moſt grievouſly complained of. Indeed, it is ſo partial, oppreſſive and unjuſt, as extended to farmers, that their complaints are but too well founded; and ſome alteration in their favour is abſolutely indiſpenſable.'

Inverneſſſhire Quarterly Report.

From the 10th November to this date, the weather has been uncommonly variable, even for a Highland diſtrict; one day a heavy fall of ſnow, the next a rapid thaw, then high gales of wind, and after theſe a return of froſt. From theſe circumſtances, little ploughing has been executed, nor much dung driven out, the ground being ſeldom ſo firm as to bear a cart, owing to the froſt being generally preceded by a ſnow ſtorm. Not one half of the uſual quantity of wheat has been got ſown; and what is ſown, was, with few exceptions, put into the ground when in the moſt unfavourable ſtate. Straw is remarkably ſcarce, more ſo than ever known in this county, though fortunately the ſtock of hay on hand is conſiderable. Turnips, which were but a light crop, are almoſt totally ruined, by the alternate froſts and thaws; and, of courſe, the butcher market muſt be ſcantily ſupplied before the graſs ſeaſon arrives.—*Feb.* 18.

Selkirkſhire Quarterly Report.

Since the date of laſt report, the weather has been changeable, often exceſſively tempeſtuous, accompanied with ſnow, though ſeldom of long duration; and whenever it began to clear up, a ſevere froſt came on directly. From theſe circumſtances, labour is in a backward ſtate; ploughing has not been ſo much ſo theſe ſeveral years. The weather, ſince the 15th, has had a more favourable aſpect; the thaw is gentle, and ſeems to be more ſteady than at any time for three months paſt; but it is enough to ſay, that there is much need for it.

The turnip crop ſuffered ſeverely from changeable weather; and, for the ſame reaſon, ſheep fed on that root came on but ſlowly. The feeder, however, will have a fairer return this year than in ſome former ones, as he purchaſed conſiderably lower; while he can ſell the ſtock, when fat, nearly as high as formerly. It will be inferred, from the ſtate of the weather, that the ſeaſon has been unfavourable for ſheep; and undoubtedly, if the ſpring is not mild, a great loſs of hogs may be apprehended. A ſevere ſtorm of ſnow from NNE. on November 20th, did a good deal of damage, chiefly by enfeebling the ſtock, and waſting the graſs at an early period of the ſeaſon. Had that ſtorm happened at a more advanced period, the loſs would have been incalculable; but at that time, the ſheep being in high condition, were enabled to make great efforts to ſave themſelves. Times at preſent wear a very unfavourable aſpect for the farmer; ſtill he is paſſive in the extreme. A ſolitary murmur may at times eſcape from an individual, againſt the abſurd criterion fixed by the property tax bill, for aſcertaining his income; but theſe murmurs will be of ſmall avail, towards procuring relief, ſuch not being to be obtained without uſing the greateſt exertions,

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and by a general and conſtitutional application to Parliament from thoſe concerned. It is impoſſible to think that redreſs would be denied, under thoſe circumſtances, when it can be ſo clearly proved, that the property tax is levied upon the farmer, not according to his means and abilities, but in an inverſe ratio! or according to his wants and neceſſities.—*Feb.* 19.

Wigtonſhire Quarterly Report.

WINTER has diſplayed all the uſual fickleneſs of our climate,—calms, tempeſts, froſts, thaws and rains. Throughout theſe variations, labour has been carried on, and is perhaps as forward as uſual at the preſent period of the ſeaſon.

Fodder, though not generally ſcarce in quantity, is, in many inſtances, of bad quality; and little proſpect as yet opens of a ſpring ſale of ſtock. Some droves are indeed ſaid to be moving off to the South, and it remains to be known how they will be diſpoſed of.

Grain markets have been advancing of late; and it would appear, from this circumſtance, that the damage done during laſt unfavourable harveſt has not been ſo extenſive as might have been apprehended.

An unfortunate typographical error crept into laſt Quarterly Report from this diſtrict. It was meant to be ſaid that the *bean crop* had univerſally failed, but it was printed *bear crop*. The latter was by no means a bad crop, though the former certainly was, barely producing ten buſhels per acre, and even that very inferior grain.——*Feb.* 20.

Morayſhire Quarterly Report.

To deſcribe the preſent ſtate of agricultural matters is an unpleaſant taſk to the reporter; a more unfavourable termination of the harveſt not having occurred in this county, nor a more deficient crop of oats and barley, for many years. Wheat, to be ſure, yielded a medium produce; but as for oats and barley, though the exporting part of Morayſhire may ſupply itſelf, the interior will want both for bread and ſeed, with little ability in the conſumers to pay, owing to a total ſtagnation in the ſale of lean ſtock during the preceding autumn. Straw is ſo ſcarce in the Highland diſtrict, that it is ſaid many inferior beaſts have been ſent out to ſtarve on the hills, rather than that the owner ſhould be ſubjected to the purchaſe of fodder for them; and perhaps they were right in adopting this unpleaſant alternative, ſeeing that the article was ſo remarkably dear.

Potatoes, which, in this neighbourhood, were ſuppoſed to be a tolerable crop, have turned out miſerably deficient, and many fields were never got dug up. Labour is much behind, and a leſſer quantity of wheat has been ſown than farmers recollect; indeed there is not one tolerable field to be ſeen; and, in pariſhes where this ſpecies of grain is the ſtaple article, there is not perhaps forty acres yet got down, and ſcarcely one of decent appearance. Much was expected to be got done in ſpring; but intenſe froſts, accompanied with heavy falls of ſnow, until the 18th inſtant, have precluded almoſt every hope of ſucceeding.

Farmers, in the low country, have, as uſual, good ſtocks of young cattle

cattle in fine condition; and for ſuch they expect ready ſale in March or April; as beef, from the general want of keep, muſt be ſcarce in all quarters. Farm ſervants and labourers were to be had laſt Martinmas on eaſier terms; ordinary ploughmen, 14l. to 16l. *per annum*, with bed and board; labourers, 16d. to 18d. per day, in winter, without victuals; in ſummer, 20d, to 2s. ——*Feb.* 20.

Letter from Falkirk, February 20.

'A WINTER more variable, during which the moſt ſudden and unexpected changes of boiſterous and inclement weather of every deſcription have followed in rapid ſucceſſion, and, what is more to our purpoſe, one more unfriendly to the purſuits of agriculture, can ſcarcely be remembered. The wet weather, mentioned in laſt report, continued with little intermiſſion until ſevere froſt ſet in, which put a premature cloſe to wheat ſowings, and diſappointed many who had not even got their ſummer fallows ſown. From theſe circumſtances, and that ſpring ſowing has hitherto been little practiſed in this diſtrict, our ſoil being long in getting dry, there will be leſs breadth of land under this crop than for two or three years paſt. Except wheat was ſown very early, it was put into the ground under very unfavourable circumſtances; and on ſome fields, ſown three months ago, ſcarcely can an appearance of a braird be yet diſcovered. Ploughing, from the circumſtances ſtated, is far behind; therefore, great exertions muſt be made to get forward with it whenever the weather permits. Owing to the winter ſetting in ſo early, and with ſo much ſeverity, great apprehenſions were generally entertained reſpecting the quantity of fodder on hand under ſuch circumſtances. This naturally occaſioned an extravagant price, and led to the moſt attentive economy, which will be all neceſſary to make out till graſs arrives, if the ſpring ſhould prove backward.

'Among the other circumſtances of this uncommon ſeaſon, may be noticed, ſome appearance of a fall in the price of farm labour. At our laſt *feeing* day (a day for hiring farm ſervants for half a year), the quantity of this article preſented in the market was greater than the demand ſeemed inclined to take off, at leaſt ſo readily as has happened on ſimilar occaſions, for ſome time paſt; and in place of maſters hurrying about the market out of breath in ſearch of ſervants, the latter were under the neceſſity of giving themſelves that trouble, and conſequently made to feel again the place which more properly belongs to them, and which the good order of ſociety requires they ſhould occupy. This has been long looked for, and anxiouſly deſired by many; and although by ſuch it may be found a temporary convenience or gratification, a recurrence of it is to be deprecated as no very favourable preſage of future proſperity.

'The landed intereſt ſeem at length rouſed to a ſenſe of the extreme hardſhips impoſed on the occupiers of land by the property-tax. Pity they had not ſooner liſtened to the early calls made on them to this point, in your work, and ſo frequently and earneſtly repeated. When a matter of revenue has been once very ſucceſsfully in operation for years, as this unqueſtionably has, it will be found very difficult to get any

Chancellor

Chancellor of the Exchequer to liſten to a change, however fair and reaſonable, which is likely to diminiſh its productiveneſs; and in the preſent ſtate of the country, when an adequate ſubſtitute would be no eaſy matter, it will require 'a long pull, a ſtrong pull, and a pull altogether,' to effect any thing to purpoſe. Unleſs, therefore, the matter is more generally taken up than hitherto appears to have been the caſe, only faint hopes of ſucceſs can be indulged.

Forfarſhire Quarterly Report.

The preceding winter has been unuſually ſevere. A ſtrong black froſt has prevailed during the greater part of it; but particularly, for a month bypaſt, no ploughing has been obtained. Now the weather is more mild. Aration is indeed far behind; and the benefit derived from winter froſts will be leſs than wiſhed for. The wheats have received a ſevere check; but, unleſs upon thin poor ſoils, the loſs by throwing out is not yet great. A good many fields late ſown are not yet brairded.

Turnips have ſuffered much, and, with the ſoft weather now ſetting in, will be of little value for ſpring food. Fodder on many farms is very ſcarce, and cannot almoſt be obtained for money. Cattle, on that account, cannot be ſuppoſed to be in good order for the ſpring markets. Fat cattle have not ſold ſo high as was expected, and, owing to the ſcarcity of keep, may remain about the ſame prices, although a riſe was looked for. Beef and mutton ſell for about 6d. per lib.

Land-rent ſeems to be rather ſtationary than on the riſe; and farming ſpeculators begin to doubt the prudence of their late tranſactions, eſpecially thoſe who have rented ſoils of an inferior quality. The price of labour is on the decline; and the fall is expected to be nearly as rapid as the late extraordinary riſe, if the preſent ſituation of manufactures continues.——*Feb.* 22.

Mid-Lothian Quarterly Report.

The current quarter has afforded ſo few incidents worthy of remark, that this report, like the ſeaſon, will be comparatively barren. The weather throughout has been ſingularly variable. Ploughing, however, is better advanced than might be expected; but ſuch repeated changes from froſt to freſh has proved highly injurious to common field turnips, many of which are completely rotten, and all of that ſpecies rendered leſs nutritive than uſually occurs at ſuch an early period of the ſeaſon. This loſs muſt be ſeriouſly felt by the cowfeeders around Edinburgh, more particularly as the great diſtillers have raiſed their grains to an unprecedented height. Neither can it be conceived that this injury is local; for, from a ſimilar cauſe, the live market at Edinburgh is glutted with raw, half fed cattle, hardly fit for the ſhambles, which, it is probable, may produce a correſpondent want when the ſeaſon is further advanced.

The various kinds of grain have turned out nearly as ſtated in laſt report, and the market has continued pretty ſteady. There is a conſiderable demand for ſeed-oats from the high diſtricts, at from 29s. to

33s. per boll, but probably not ſo much as in prudence there ought to be. Many people are providing ſeed-oats from their neighbours, perhaps little leſs affected by froſt than their own; others are previouſly trying their grain in pots, which is undoubtedly proper. But theſe experiments ought to be gone about with circumſpection; for it is a fact well aſcertained, although not univerſally known, that corn may be partially tainted, and puſh forth roots, while the acroſpire is ſo feeble and imperfect that it ſoon dies; or, ſhould it ſurvive for a time, never produces a ſtem of the uſual ſize and vigour, much leſs will it bring grain to maturity. Hence a thin, late, and ſcanty produce may be the conſequence. To thoſe who are old enough to remember the effects of the year 1782 on crop 1783, theſe effects will be apparent.——*Feb.* 22.

Berwickſhire Report, from October 28. 1807, *to February* 22. 1808.

NOVEMBER was marked by ſome of the moſt ſevere weather ever remembered at that period of the ſeaſon. In the beginning of the month we had ſleety blaſts, followed by a few fine days; but, from the 13th to the end, was almoſt continual froſt, accompanied by frequent falls of ſnow, particularly on the 19th, 20th, and 23d, when the wind blew hurricanes at N., drifting the ſnow to a great depth in the hill diſtrict. The three laſt months have exhibited a ſucceſſive alternation of froſt and thaw every three or four days, with the moſt ſudden changes of temperature, amounting ſometimes to 15 degrees in as many hours. Rain and ſnow ſhowers have alſo been frequent, but neither to any great exceſs.

The letting price, for turnip of good quality, at the beginning of the ſeaſon, was from 6l. to 8l. per Engliſh acre; but the crop will not now ſtand the eatage that was expected, many of the beſt fields having ſuffered ſeverely by the rot, which will probably occaſion a glut in the fat market.

From the unſettled ſtate of the weather in October, the *fag-end* of the Lammermuir crop was not carried till the beginning of November; and from the ſame cauſe, or, rather, from the almoſt total excluſion of autumn (winter having aſſumed the reins early in September), the ground occupied by winter wheat this ſeaſon is fully a third ſhort of laſt year's quantity.

Ploughing is far behind, and little ſpring wheat has yet been ſown. Indeed, from the wet ſtate of the fields at preſent, there is but ſmall hopes that any extent of bean ſtubble, or bare fallow, can now be ſown with that grain.

Markets for lean cattle at Martinmas were exceſſively dull, and prices from 16 to 20 *per cent.* below thoſe of 1806. Fat alſo ſold heavily in the end of the year, but has experienced a pretty current demand for theſe ſix weeks paſt, and prices have been tolerably ſteady. Beſt beef from 7s. to 8s. per ſtone, ſink; ditto mutton, from 7d. to 8d. per lib. ſink, Avoirdupois weight. However, if turnip ſtock is haſtily tumbled into the market, a temporary depreſſion muſt be expected, with a concomitant advance at the approach of graſs.

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The grain crops turn out nearly as ſtated in laſt report, the qualities of wheat having proved fully as various as then ſuſpected. Prices continued advancing till about Chriſtmas, ſince which they have been almoſt ſtationary. Winter wheats and young clovers have at preſent a very weather-beaten aſpect.——*Feb.* 22.

Tweeddale Quarterly Report.

It is impracticable to convey any correct idea of the weather through the paſt quarter, ſcarcely three days having been alike; and in many of them, all the varieties of ſtorm and tempeſt were experienced. Setting in ſo early, the conſequences of winter have been, and will be ſeverely felt. Cattle were thus thrown upon dry food ſooner than expected, when a general ſcarcity of fodder was apprehended, and which will unavoidably be realized. Sheep were put into bad condition, while ſmall benefit could be derived from the turnip crop, which was either covered with ſnow, bound up with froſt, or drenched with moiſture. Field labour was alſo thrown quite behind, the harveſt being ſcarcely over when winter arrived. Perhaps at this date two thirds of that labour remains unexecuted, while the exhauſted ſtate of the fodder is imperfectly calculated to animate and ſtrengthen the beſtial during its execution.

Much of the grain which remained uncut during the September froſts, may be ſuſpected to be of improper quality for ſeed; and of courſe, various farmers have already purchaſed ſeed from other diſtricts. The deficiency of grain, both in barn and mill, is now completely aſcertained. Many of the oats do not yield more than half of the meal cuſtomarily returned; even the beſt do not come within two or three pecks per boll of their ordinary produce. The peas crop of this diſtrict is an entire blank, and the want of this grain will be ſeverely felt.

Fat cattle ſell lower than laſt year, and perhaps their quality is as much inferior. Horſes for the draught ſtill fetch high prices, but thoſe for the ſaddle are not in great requeſt. At hiring markets, the value of labour ſeems to be looking down. The ſame remark, however, cannot be applied to the value of land; though it is ſufficiently underſtood, that ſome late adventurers have rather miſcalculated, when bargaining for that article.——*Feb.* 22.

Letter from Langholm, February 23.

'For ſeveral months paſt, the weather has been ſubject to conſtant viciſſitudes, from ſevere froſt to heavy rain. The ſheep ſtocks are in conſequence lean; and ſhould the ſpring months prove unfavourable, a conſiderable loſs of both old and young may be expected. The turnip crop, which in general was light, ſuffered much from the frequent black froſts and ſucceeding rains. Hay from ſown graſs was not generally a weighty crop; and both ſtraw and natural grown hay, even in moſt places, were indifferently got; in conſequence, the prices of theſe articles have advanced. Seed corn is dear, as much of that grown in the higher diſtricts will be unfit for the purpoſe. Potatoes are ſcarce, and of a very indifferent quality; and, in ſeveral places, were not taken up, owing to the froſts which ſet in early in November.

'Upon the whole, laſt ſeaſon has been vaſtly unfavourable to the farmer. Stock of every kind has been upon the decline for ſome time paſt, whilſt

corn

corn crops have failed, yielding a very inferior return, and being deficient both in quantity and quality. Add to theſe his daily increaſing expenſes, in taxes and other public burdens, among which, the abſurd and arbitrary impoſt, denominated Property Tax, is none of the leaſt oppreſſive; in levying which, the partial and erroneous ſtandard of the preſent rent which the farmer pays, is ſelected as the criterion for aſcertaining his actual property. Under ſuch circumſtances, the preſent ſituation of the tenant, who has lately taken his farm at a rack-rent, is none of the moſt enviable.'

Letter from Glaſgow, 24th February.

'We have at preſent on hand a conſiderable ſtock of old wheat, formed principally by large arrivals from America towards the end of laſt year, and by ſeveral cargoes from Liverpool. We preſume that the quantity will be ſufficient to ſerve for a mixture throughout the ſpring and ſummer months. In giving our opinion as to the probable turn which wheat may ſhortly take, we muſt confeſs that we feel ourſelves at a loſs. We are ſtill ignorant of the part which America may take; and *on her* depends, in a conſiderable degree, whether this grain ſhall riſe or fall in price. If ſhe declare war againſt us, there can ſcarce be a doubt but that an advance will take place; for we ſhall then be deprived of our uſual ſupplies from thence, and in all probability be obliged to ſend from this country conſiderable quantities to our iſlands in the Weſt Indies. If peace be preſerved, even making allowance for our preſent large ſtock, we do not believe, from the general face of things, that a material reduction can take place. From Ireland, and the ſouth of Scotland, we have received of late large ſupplies of oats: theſe have, in the mean time, glutted our market, and prices in conſequence have given way. We are of opinion, however, that this grain will ſhortly recover itſelf, the conſumpt being greater than uſual, in conſequence of the ſtablers making it a ſubſtitute for beans, on account of the high price of the latter.

'Large quantities of beans have arrived of late from England; and on account of the dull ſale, the ſtock on hand is ſtill bulky. Few or no peas at market.

'There is little or no barley in the poſſeſſion of the merchants; but the brewers and diſtillers having a tolerable ſtock, may prevent any conſiderable riſe in the price of this grain.

'The weather, during the latter part of laſt year, and throughout the winter, having been extremely unfavourable for ſowing wheat, the quantity depoſited was far ſhort of the two laſt years; nor do we think that there is much time now for the proſecution of this work. Annexed you have a ſtate of our prices.

'*State of Glaſgow Markets, 24th February.*

Dantzic Wheat -	38s. to 40s.	p. boll of Linlithgowſhire meaſure.
Foreign Red do. -	34s.—38s.	
Scotch (new) do. -	30s.—36s.	
Ditto (old) do. -	38s.—40s.	
Engliſh do. - -	37s.—39s.	

American

American Wheat -	40s.—41s.	p. boll of 240 lib.
Iriſh Mealing Oats -	29s.—30s.6d.	do. 264 lib.
Do. Inferior do. -	27s.—28s.	
Scotch Potatoe do. -	24s.—28s.	do. Renfrewſhire meaſure.
Do. Small do. - -	20s.—24s.	
Engliſh Barley - -	40s.—00s.	
Scotch do. - - -	30s.—33s.	do. Stirlingſhire do.
Iriſh do. - - - -	26s.—28s.	do. Renfrewſhire do.
Engliſh beans - -	38s.—39s.	
Scotch do. - - -	35s.—36s.	do. Stirlingſhire do.
Do. Grey Peas -	34s.—36s.	do. do. do.
Do Oat Meal - -	28s.—30s.	
Iriſh do. - - - -	27s.—28s.	do. of 140 lib.
Fine Flour - - -	60s.—62s.	Sack of 280 lib.

ENGLAND.

Lincolnſhire Quarterly Report.

LITTLE has been done this winter with the fen drainage, owing to the ſeverity of the weather, and the uncommon quantity of black froſt which has prevailed through the greateſt part of it. Markets, both for grain and live-ſtock, have been uniformly dull, and prices conſiderably lower than expected. No kind of butcher meat is above 6d. per lib. avoirdupois. Wheat, from 60s. to 67s.; Barley, 40s. to 45s.; Oats, 28s. to 32s.; Beans, 60s; Rye, 48s. to 50s., all per quarter of eight Wincheſter buſhels.

Various obſervations have lately been received from that worthy and patriotic gentleman SIR JOHN SINCLAIR, Baronet, reſpecting a general encloſure bill. To divide and cultivate waſtes, commons, and common-field lands, muſt be admitted to be a meaſure of important national benefit, and well deſerving the moſt minute attention of the legiſlative body. It would not be difficult to arrange a bill to carry ſuch a meaſure into execution, provided general principles were only reſorted to; but if particulars are entered upon, and details given applicable to every branch of commonable land, difficulties may ariſe at the outſet, of ſufficient magnitude to overturn the beſt concerted plan.—15. *Feb.*

Yorkſhire Quarterly Report.

THE proof on the thraſhing floor of the different grains, the produce of laſt harveſt, may be ſtated as follows, according to appearances in this diſtrict.—Wheat, on the whole, tolerably good in produce, fine in quality, and drier than uſual. Barley rather leſs than an average, but good and dry in quality. Oats are ſtill more inferior, and beans and peas ſcarcely yield ſeed again. Notwithſtanding this fully aſcertained deficiency in ſome of the crops, the price of the various articles of grain remains ſteady at a moderate ratio; except, of late, ſome advance in that of beans, peas, and barley. Whether the preſent ſtate of the war will admit of importation, ſhould the home ſupply prove inadequate, may be doubtful; however, it is probable, that no ſpeculation in any of theſe

articles

articles is now ventured upon to any large extent. The preſent prices here are,—Wheat 10s., Barley 6s., Oats 4s., Rye 6s. 6d., and Beans 8s. per buſhel of Wincheſter.

Potatoes have turned out a light crop; and, to add to the defect, many growers neglected to take them up in due time; ſo that a conſiderable proportion was materially injured by the ſevere froſts, which commenced earlier in the autumn than uſual. They are now ſelling at 4s. per buſhel upheaped.

The growing wheats, which generally were ſown later than common, have ſuffered materially, from the frequency of froſt, without ſnow, at the time they were beginning to appear above ground; ſo that a very thin ſprinkling of ſummer plants can only be expected, eſpecially on the poor and wet ſoils. However, there is nothing deciſive in preſent appearances.

Owing to the early froſts in September, and a conſequent partial growth of herbage in October, on ſuch lands as are liable to the rot, before vegetation has ceaſed for the ſeaſon, conſiderable loſs has been, and is likely to be, ſuſtained in ſheep ſtock. The wedders feeding on turnips are looking well in ſome places; but, from the uncommon failure of that crop in many parts of this diſtrict, in all probability they muſt ſhortly be ſold off, for want of food, to great diſadvantage and loſs. Some ſtockmaſters had bought large fields of turnip in the ſummer, when the crop was promiſing, which, from their failure, will coſt 2s. per week per ſheep for the wintering.

Fat and lean cattle and ſheep are at low prices for the time of the year. Pigs are rather increaſing in value. Beef, Mutton, and Pork, at 6d.; Veal 7d. per lib. The price of horſes of all ſorts is lower than for ſome time paſt.

The preſent proſpect, for the induſtrious claſſes of people in every branch of buſineſs, is gloomy beyond that of any former period; yet we muſt confeſs, that it is at preſent rather leſs ſo to the farmers than to many other claſſes of the people. How long it may be before they be compelled to yield in their turn, under their accumulated and accumulating burdens, a very ſhort time may enable us to conjecture —— *Feb.* 15.

Letter from a Farmer near Wakefield, February 17.

'THE winter ſet in, here, the ſecond week in November; and a ſucceſſion of froſt, ſnow, and rain, has ſince continued alternately, changing every three or four days; and as ſome wheat then remained to be ſown, it was got into the ground rather unfavourably. In conſequence of this, it comes out very thin and irregular. Indeed, that which was ſown in December has yet ſcarcely made its appearance,—ſo unfavourable has the weather been to vegetation. We have had little ſnow to cover the ground; therefore, the young clovers, winter tares and rape, as well as wheat, are much hurt, and at preſent carry an unfavourable appearance, except what was ſown early, on land

in high cultivation. The few turnips that eſcaped the blight in September, are alſo greatly injured; of courſe, this uſeful root is become ſcarce, and dearer than ever remembered ſince its firſt cultivation. Thoſe who purchaſed ſheep for winter, fed on turnip (though at conſiderably reduced prices), will in all appearance have a bad concern, except they can keep through April, when it is expected butcher-meat will get ſcarce and dear; though, in the preſent ſtate of the country, it is doubtful whether the advance will compenſate for the great expenſe of ſheep-keep, which is now in ſome places as high as 1s. and 1s. 4d. per head per week. All kinds of winter food are dear; hay, 9d. and 10d. per ſtone of 14 lib.; oil-cake 13l. per ton. Our market has been tolerably ſupplied with grain ſince October, particularly with wheat, which has come to hand in great abundance from the ſouthern counties, where it was a heavy crop, and of the moſt excellent quality and condition. Every ſort of grain is rather looking up. Barley has already got dearer, and comes ſparingly to market. Leſs malt has been made than uſual; notwithſtanding which, it meets with a heavy ſale, in conſequence of the badneſs of trade, and want of employment to our manufacturers, which greatly reduces the conſumption.

'In conſequence of the ſcarcity of winter feed, I have been induced to try an experiment upon molaſſes, or treacle, as a food for cattle, and a ſubſtitute for oil-cake and bean-meal. I was led into this, from a paragraph I ſaw in the St James's Chronicle recommending it to the public, to be diſſolved in water, and given to the cattle to drink. I thought it would be more beneficial to mix it with their food; and as my turnips had failed, on which of late years I kept my milch cows, I was obliged to give oil-cake ground, mixed with malt-duſt, to make them milk. The quantity I gave each cow was 4 lib. oil-cake, which coſts 6d., with malt-duſt of the ſame value, each day, and as much hay as they would eat beſides; which made them milk very well. An account was kept of the quantity of milk and butter which came from three cows in one week, fed as above; and the next week 2 lib. treacle, which coſt 6d., diluted in water, and mixed with the like quantity of malt-duſt and hay, produced from the ſame cows an equal quantity of milk and butter. In order to make a further experiment, I gave the ſame quantity of molaſſes, with double the quantity of malt-duſt, and barley ſtraw in lieu of hay. The cows milked equally well, and gave as much butter as before, and that of a moſt excellent quality and flavour. This has convinced me, that molaſſes poſſeſs a large portion of nouriſhment for cattle; for I have tried malt-duſt alone, and did not find it to produce either much milk or butter; and where malt-duſt cannot be got, I have no doubt but it will anſwer very well to mix molaſſes with cut ſtraw, chaff, or other provender, the cattle being very fond of it in any kind of food, and will be a uſeful ſubſtitute for oil-cake or bean-meal, when the price does not exceed the preſent proportion with theſe articles. If you think this information is worth inſerting in your valuable work, you are at liberty to do

do it, as it may put ſome of your readers upon making further and more particular experiments.'

Northumberland Quarterly Report.

In the report of the winter quarter of laſt year, it was remarked as being ſingular in having had no ſnow, and only three days of froſt, and thoſe at different times. This winter has been as remarkable for the contrary; and, I believe, there is not an inſtance, ſince the year 1739, of ſuch intenſe froſts ſetting in ſo early, and continuing ſo long.

In the beginning of November, we had ſtormy cold winds and wet; on the 10th, the froſt began; on the 13th, ſnow 3 or 4 inches deep; on the 20th, a dreadful ſtorm of driving ſnow, by which the roads in many places were blocked up, ſeveral lives loſt, and great numbers of ſheep, on the mountain farms, buried. Many of theſe were dug out alive; thoſe that were ſoon found may do well, but ſuch as lay under the ſnow a week or ten days, it is feared, will die in the courſe of the ſpring, and add to the numbers that have already periſhed. Another ſtorm of driving ſnow took place on the 7th December; and, from the 10th November to the 25th December, intenſe froſt prevailed, (except partial thaws on the 4th, 12th, and 13th December); from the 25th to 29th, freſh and much rain; from theſe to the preſent (with the exception of freſh from the 6th to 11th January) the froſt has continued, with now and then a day of *partial thaw*, which unfortunately diſſolved the little ſnow there was, and left the turnips expoſed to the ſeverity of the froſt; which, as might naturally be expected, from ſuch ſudden and alternate changes, have ſuffered materially. The ſtorm of driving ſnow on the 13th, ſeems to have been general; but, to the ſouthward, much more has fallen than in this neighbourhood. On the 17th, a thaw came on, which, it is to be hoped, may continue.

The extent of the injury done to the turnips, is not yet known; but the effect is beginning to be felt, by Morpeth market being crowded with ſtock, which moſt probably will be the caſe for ſome weeks, and the prices of courſe reduced; though, after this glut is over, there is not a doubt but they will get up again.

The uſual operations of huſbandry have been much impeded by the continuance of ſuch uncommon weather; a great deal of land is yet to plough, which ought to have been done before Chriſtmas; and much of what has been done, has been ploughed with too much froſt in it.

There is very little ſpring wheat yet ſown upon the dry lands after turnips; and the fallows upon wet ſoils, that could not, from the wetneſs of the ſeaſon, be ſown laſt autumn, have at preſent a precarious proſpect of being ſown with wheat this ſpring to advantage.

The markets for live ſtock, which were ſo very low in the autumn, have been gradually riſing. Beef is now from 6s. to 7s. per ſtone of 14 lib. ſink; and mutton, 6d. to 7d. per lib. ſink.—*Feb.* 20.

Letter from London, 23d February.

'The corn trade has paſſed through the winter quarter in a ſtate of tranquillity little expected by thoſe who, at the cloſe of the harveſt, believed

lieved in the reports of defolated crops, ruined farmers, and dearth of bread.

'This market has been very abundantly fupplied with the two primary articles of conſumption, wheat and oats; and indeed, there has not been any want of corn of the other kinds, although the almoſt excluſive ſource from whence theſe ſupplies have been drawn, is the counties on the eaſt coaſt, without either the foreign aid of America or the Continent of Europe, or even of Scotland, which have all formerly furniſhed conſiderable quantities of wheat, flour, and oats; but which do not this year afford the proſpect of contributing to our wants.

'Yet, ſo regularly and adequately have the quantities of corn come forward, that although extenſive purchaſes of wheat have been made, upon the ſpeculation of a war with America,—the preſſure of the breweries and diſtilleries being all at full work,—and the uſual increaſed conſumption of oats at the meeting of Parliament,—ſuperadding the demand for ſpring ſeed of all kinds;—the only impreſſion lately felt, has been a gradual decline in price, and a dulneſs in ſale of all ſorts, excepting barley, which has experienced a trifling advance.

'Very favourable expectations were formed, after harveſt, of the qualities of the corn in the ſouthern counties. But after the firſt deliveries, the wheat has not turned out in general ſo fine in plumpneſs and condition. The barley from ſome diſtricts has proved thin and flinty. Oats are deficient in weight, and particularly ſo from the newly drained fen lands. The beans are handſome and dry, but are all more or leſs hollowed out by the worm, and very light. Peas of both kinds are ſmaller than uſual. Rye and tares ſeem to be the moſt perfect produce of the laſt year.

'The quantity of wheat and barley at market yeſterday (Monday) was leſs than it has been for ſome weeks paſt. Of oats, beans, peas, and malt, there was abundance. The prices of all kinds are noted below, on which we do not look for any immediate or material alteration, unleſs occaſioned by ſome external cauſe which we are not at preſent aware of.

Wheat, Eſſex, Kent and Suffolk White	72s.	74s.		
——— ditto and Norfolk Red	68s.	70s.	72s.	
——— North Country	65s.	68s.	70s.	
——— Dantzic and Koningſberg	63s.	68s.		
——— Ruſſia and Courland	50s.	56s.		
Barley, Norfolk and Suffolk	42s.	46s.	48s.	
——— North Country	36s.	40s.		per quarter
Malt, Norfolk and Suffolk	68s.	76s.		Wincheſter.
Rapeſeed, per laſt of 10 quarters	32l.	33l.		
Rye	50s.	52s.		
Beans, Pigeon and Small	54s.	56s.	60s.	
——— Ticks and Large	52s.	54s.	55s.	
Peas, White Boilers	150s.	160s.	168s.	
——— Hog or Grey	62s.	65s.		

Oats,

Oats, Potatoe	40s. 41s.	per quarter Winchester.
—— Poland	35s. 36s. 38s.	
—— Feed (or thin)	32s. 35s. 36s.	
Flour, Engliſh, per ſack	60s. 63s.	
—— American, per 196 lib.	38s.	
Tares, per buſhel	21s. 22s.	

To give you a juſt idea of the amplitude of the ſupplies which have been brought to this market from our own counties during the winter, it may not be amiſs to ſtate, that the average weekly quantities have been, of

Wheat about	7500 quarters.
Barley ——	6000
Malt ——	5000
Oats ——	14000
Beans ——	1200
Peas ——	600

Beſides conſiderable (unaſcertained) quantities of flour and malt, by the inland navigations.

The ſeverity of the winter is ſuppoſed to have injured the growing crop of rapeſeed; but no complaints are made on the appearance of the wheat fields in the neighbouring counties.

POSTSCRIPT TO FIRST BRANCH.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

HAVING obſerved in Saturday's Courant, that a Committee is appointed in the Houſe of Commons, to conſider the propriety of allowing ſugar to be uſed in diſtillation at the preſent grain duties; and underſtanding that this Committee is likewiſe to inquire into the expediency of permitting ſpirits made in Ireland to be imported into Scotland, upon paying *at landing* the nominal duty charged the Scotch diſtiller, I take the liberty (through the medium of your Magazine) of putting the landed intereſt on their guard againſt a meaſure which muſt prove ruinous to the Scotch diſtillers, and, of courſe, greatly injurious to the landholders and farmers. I believe I ſpeak the ſentiments of both the land proprietors and diſtillers of Scotland, when I ſay they expect no excluſive advantage over either their Iriſh neighbours or the Weſt India planters; and if the Committee ſhall ſee it neceſſary, for a period, to turn the diſtillers on ſugar, to relieve a little the Weſt India adventurers, I am perſuaded that neither of them will make any objections. I do not, however, perceive any imperious call for the Scotch tamely ſurrendering their birthright *altogether* to the Iriſh nation. The ſituation of the diſtillers in the two countries is widely different; for, while the Iriſh diſtiller was working to advantage on the propoſed plan, the Scots diſtiller would either be driven from his own market, or to ruin. In Ireland, the diſtillers are

ſubjected

ſubjected to no inconvenient reſtrictions; and the revenue is either managed *with great liberality*, or *much avoided*. In Scotland, the preſent law is full of reſtrictions highly injurious and expenſive; while the revenue is ſecured with the greateſt accuracy, and without any deduction whatever. In Ireland, a ſtill of 3000 gallons has only to produce about 5000 gallons of ſpirits per week. In Scotland, a ſtill of 120 gallons has to make nearly the ſame quantity of ſpirits, or is charged duty for ſo much. The proportions fixed by law for the Scots, moſt, if not all, diſtillers have found great difficulty in reaching; and, owing to this, many of them have, in place of paying 5s. 3d. (the nominal duty) on the gallon of ſpirits diſtilled, actually paid 6s., and ſome 6s. 6d. per gallon. In Ireland no ſuch hardſhip exiſts. It is a well known fact, that the Iriſh diſtillers can make double the quantity of ſpirits required by law; and for the duties on the ſpirits conſumed at home, a diſcount of about 16 *per cent.* is allowed; and on exportation, the advantage in this way will ſtill be greater. Their large ſtills, and the time allowed, enables them to make their ſpirits to any ſtrength they chooſe, which, of courſe, induces them to fix upon that degree moſt to their advantage;—this, with the ſhore-gauging and duties being *only payable at landing* (while the Scots pay a great part of them in advance, and all their arrears at the end of every month), gives a preference to the Iriſh of at leaſt 20 *per cent.* on duties; and if the advantages reſulting from their method of working, independent of ſavings from the revenue, are taken into view, they cannot be computed at leſs than 10 *per cent.*, making together 30 *per cent.* of ſure preference to the Iriſh over the Scots diſtiller. Nothing can illuſtrate more clearly the inequality of the meaſure commented upon, than the following example. In 1807, a quantity of ſpirits was exported to Ireland from Scotland; the law, then exiſting, but now ſuſpended, allowed a drawback here of 8s. 2¼d. per gallon, and only required about 4s. 10d. of duty to be paid in Ireland; yet, notwithſtanding this preference of 3s. 4¼d., there was a loſs, in ſelling theſe ſpirits in Dublin, of 6d. per gallon to the Scots manufacturer. In 1805, under the ſame duties, the Iriſh diſtillers exported ſpirits to Scotland, and with advantage. Lately, the price of ſpirits in Dublin was, excluſive of duty, only 1s. 6d. per gallon; and here they cannot be made under 4s. From theſe facts, it muſt appear obvious, that if Iriſh ſpirits are allowed to be imported into Scotland at the nominal duty of 5s. 3d. per gallon, the Lowland diſtillers muſt be annihilated. Works which have coſt more than half a million in erecting, which pay nearly 700,000l. annually of duty, and which conſume yearly upwards of 200,000 bolls barley, principally of the growth of Scotland, will be rendered uſeleſs. The grain moſt congenial to the ſoil of a great part of Scotland will be unſaleable at home; the feeding of cattle from the grains will be at an end; a conſequent ſcarcity of fat cattle in winter and ſpring will be ſeverely felt; and the offals, ſo highly beneficial to agriculture, will be transferred to another part of the empire. Does not, therefore, ſuch a meaſure, which ſtrikes at the root of the principal ſource of revenue; carries

off

off the conſumption of barley; puts an end to the feeding of cattle in the uſual way, and affects materially the whole agricultural intereſt of Scotland,—call loudly for the interference of landed proprietors? If government does not ſee the propriety of putting all the diſtillers in England, Ireland and Scotland, under the ſame regulations and duties; or if they do not conſider it as expedient to confine the conſumption of ſpirits in the different countries to thoſe manufactured therein reſpectively, it certainly cannot be thought an unfair propoſal, to cauſe diſtillers, working for exportation, to be placed exactly under the ſame ſurvey, and in every reſpect under the ſame regulations and duties as the diſtillers are in the country to which ſuch ſpirits are to be exported. While every attempt is laudably made to conciliate Ireland, let us be cautious we do not, in the clamour of party, loſe ſight of thoſe maxims of impartiality and juſtice, which ought to regulate all laws. If it is wiſhed to give Ireland an opportunity of extending her trade, let her have what ſhe is in juſtice entitled to, but let not her proſperity be raiſed on our ruin. I have haſtily made theſe remarks, truſting they will ſtimulate our countrymen to take an intereſt in this ſubject; and am ſatisfied, if a fair repreſentation is made to his Majeſty's miniſters, nothing but what is judged for the intereſt of both countries will be paſſed into a law. Hoping, therefore, that ſuch ſteps will be taken by our landed proprietors and repreſentatives in Parliament, as effectually to preſerve the juſt rights of all concerned, I am,

29. *Feb.* 1808. A Friend to Trade.

OBITUARY.

Died at Amisfield, near Haddington, on Wedneſday the 20th January laſt, Francis Lord Elcho, a nobleman, whoſe truly amiable manners endeared him to all who were honoured with his acquaintance; the whole tenor of whoſe active life ſeemed to be one continued ſeries of kindneſs, friendſhip and philanthropy.

Many, every day, take their departure *for that undiſcovered country, from whoſe bourne no traveller returns;* but few or none quit this ſublunary ſcene, whoſe *loſs* is more ſeverely *felt*, whoſe *memory* will be more *revered*, or who *lived* more *reſpected*, and deſervedly *beloved*.

Verſes on the above lamented Event.

As trembling mortals to the grim tyrant, Death,
Reluctant yield their laſt, their fleeting breath;
So all muſt fall beneath his iron rod,
Whoſe mandate's iſſued by Almighty God.—
Shall Worth and Merit ſink to endleſs reſt,
Whilſt Memory holds her ſeat in Friendſhip's breaſt?
No; ſince in Elcho thoſe conſpicuous ſhone,
Be this fair ſcroll inſcrib'd upon his ſtone.

Scroll.

Peace to thy manes: Gentle was thy mind;
In virtue *active*, in *affections* kind:
Thy loſs, the fatherleſs and widow mourn,
Whilſt *orphans'* tears embalm thy ſacred *urn*.

The

THE above character, and accompanying verſes, furniſhed by a reſpectable correſpondent, give a correct view of Lord Elcho, as a man, as a friend, and as a neighbour. But, wiſhing to pay the fulleſt tribute of regard to departed worth, we add a few things reſpecting his Lordſhip as an agriculturiſt, a ſubject particularly connected with the deſign of this work, and which ought not to paſs unnoticed.

LORD ELCHO, at an early period, ſhowed a predilection for agriculture; and, in later years, his attention was in a great meaſure engaged by that art. He had ſtudied the principles of agriculture more minutely than many of his contemporaries, and thereby was enabled to conduct every practical operation in the moſt approved and perfect manner. His land was always clean, well drained, and richly manured; and he was more diligent and attentive in gathering and preparing compoſt middens than any perſon we ever witneſſed. With regard to fencing, planting and gardening, ſubjects which are particularly within the province of the gentleman agriculturiſt, his Lordſhip was diſtinguiſhed for poſſeſſing the fulleſt knowledge, and for executing each of them with ſingular exactneſs; and in lining off, making and repairing roads, he was eminently judicious, and remarkably accurate. His activity, on all occaſions, was conſpicuous; and he ſpared neither trouble nor expenſe in executing the various improvements which occupied his attention. With the judgment of an *amateur* he formed his plans; and they were all executed with the like preciſion as might be expected from the beſt actual farmer.

The writer of this article ſpeaks of his Lordſhip's conduct from perſonal knowledge and daily obſervation: but, had he been at any loſs to aſcertain Lord Elcho's talents as an agriculturiſt, he might have gathered ſufficient evidence at the roup of his farm-ſtock on Saturday laſt, (27th February.) There, every article appeared to be of the beſt kind, and in the higheſt condition. The implements of huſbandry were numerous, and all of ſuperior qualities; while the milch cows were deſervedly conſidered as much better choſen than thoſe generally found in Scotiſh dairies. Nay more; every fence and every road ſeemed to be in the beſt poſſible order; whilſt the farm-offices preſented a picture, wherein neither neatneſs nor ornament were diſregarded. In a word, the ſight of the farm and farm-ſtock would have gratified the beholder, had he not been reminded, at every ſtep, of the event which produced the ſight he was then witneſſing.

Upon the whole, the death of Lord Elcho may be regarded as a ſevere blow to the diſtrict with which he was chiefly connected. He did much good, under circumſtances comparatively limited; but had Providence ſpared him till theſe circumſtances were changed, in all probability he would have proved a bleſſing to his country, to his friends, and to the numerous tenantry of his family eſtates. He was eſteemed by all when alive; and now, when gone, reſpect to his memory is indelibly impreſſed upon every heart. N.

[The

[The following Tablet to the memory of Thomas Davis, Esq., an eminent agriculturiſt in Wiltſhire, is inſerted at the requeſt of Sir John Sinclair, Bart.]

TO THE

Highly-merited Honour

Of that moſt uſeful

Benefactor and Ornament of his Country,

THOMAS DAVIS,

Of Longleat and Horningſham,

In the County of Wilts, *Gentleman;*

Who had been an invaluable Member of

The Bath and West of England Society

From its original Inſtitution:

A Man, in whom very ſuperior Talents,

and the

Moſt rare Attainments of uſeful and ſcientific Knowledge,

Were combined with the moſt ardent Exertion;

and

The moſt luminous Faculty of general Communication,

With the moſt active Benevolence, and

Suavity of Manners:

All which Qualities were equalled only by his

Incorruptible Integrity!

He departed this Life, univerſally regretted,

On the 10th day of November;

And the Annual Meeting of the ſaid Society,

On the 1ſt day of December following,

By a warm and unanimous Vote, decreed

This Tablet,

To ſignalize his Name,

and

To perpetuate their Remembrance of

His Virtues:

Anno 1807.

NOTICES TO CORRESPONDENTS.

We are much obliged to *A Conſtant Reader*, for the ſeveral communications lately ſent us; but he muſt be aware, that we cannot *print* ſo faſt as he *writes*. One of his papers will appear in next Number. We cannot undertake for more.

The letter from SEVERUS, on the improvement of the country by roads, &c. ſhall not be neglected. The like notice may be given concerning the paper on the Fife and Perth canals, which, at this time, could not be undertaken. Temporary articles claim our firſt attention; but, in other reſpects, the ſtricteſt impartiality will be exerciſed.

In our next Number, the copy of a leaſe, drawn up by profeſſional gentlemen for the guidance of a large eſtate in Scotland, ſhall be ſubmitted to the conſideration of our readers. We promiſed inſertion in this number, but were unable to perform. Remarks from practical agriculturiſts are reſpectfully ſolicited.

The excellent obſervations of our worthy friend T. S. S. are neceſſarily poſtponed, together with thoſe of *A Kentiſh Grazier*. Both were in the *roll*; but the time of the court would not allow them to be called.

The amendments propoſed on the *Plan for cutting Tangle or Seaware*, p. 58, were too late in reaching us. We are ſorry to learn, that the *Tangle Gatherer*, upon trial, is found to be defective.

A great many papers are under conſideration. We thank the ſeveral writers for aſſiſting us ſo liberally, and ſhall bring forward as faſt as poſſible thoſe entitled to inſertion.

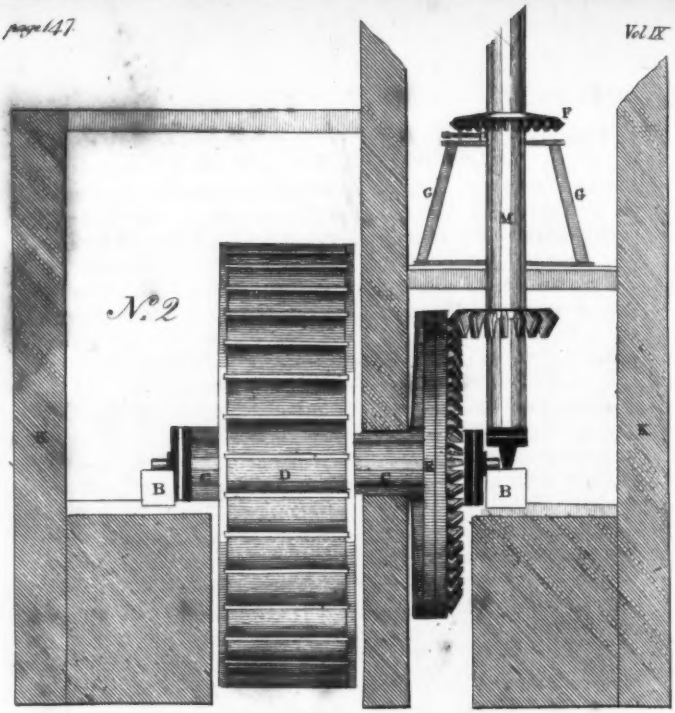
We are extremely ſorry that room for little more than half of the intelligence furniſhed could be got in this Number. Independent of the curtailments made almoſt on every article, we were under the neceſſity of keeping back the Eaſt Lothian, Roſs, Dumfries, Fife, and Eaſt Riding of York reports, with various letters of intelligence from different gentlemen. We beg our reporters will excuſe theſe omiſſions, eſpecially as it was not in our power to avoid them.

No. XXXIV. will be published on the first Monday of June.

☞ The Reverend MR CAMPBELL, Kilcalmonell, requeſts that the following liſt of *Errata*, in his two papers No. 31. & 32., may be given.

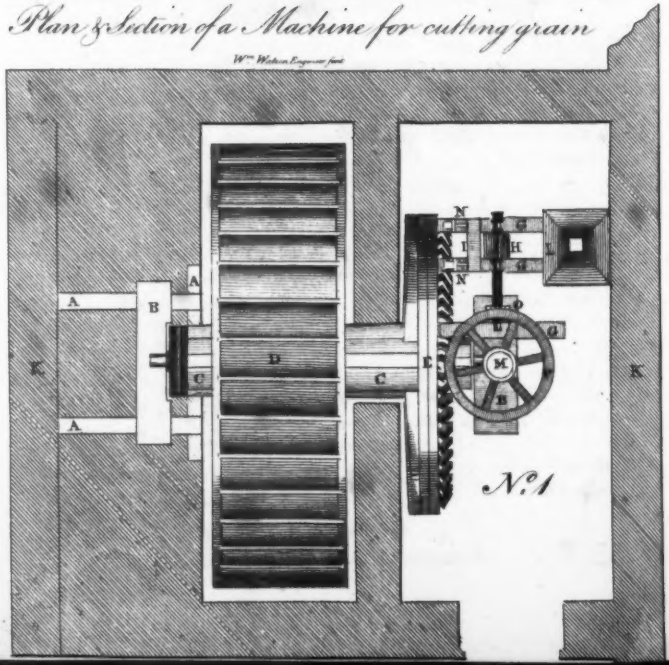
No. 31. p. 288. 15th line from the top, inſtead of *ridges*, read *wedges*.
No. 32. p. 414. line 14th from the bottom, inſtead of *but reduced to a ſcale of one tenth of an inch to one inch*, read *but on a reduced ſcale*.
P. 415, line 17th from the top, inſtead of *Fig.* r. read *Fig.* 2.—In the plate prefixed to No. 32. article *Cramp*, read 9 inſtead of 7, 3 inſtead of 5, 5 inſtead of 3, 7 inſtead of 8, and 8 inſtead of 9.

D. WILLISON, PRINTER, EDINBURGH.



Plan & Section of a Machine for cutting grain

Wm Watson Engraver fecit



DESCRIPTION *of* PLATE *fronting* No. XXXIV. *Far. Mag.*

The uppermost View is a Section; the other a Ground Plan.

A A A, Framing under water wheel shaft.
B B, Bolster for water wheel shaft.
C C, Water wheel shaft.
D D, Water wheel.
E E, Pit wheel, to communicate motion to thrashing mill and cutting machine.
F F, Wheel to drive cutting machine.
G G G, Frame on which cutting cylinder runs.
H, Cylinder.
I, Breast on which cylinder acts.
N N, Two screws to adjust breast to cylinder.
O, Pinion under wheel F.
K, Refers to walls of the house.
L, Hopper to convey grain to cylinder.

Same Letters refer to Plan and Section.

WM. WATSON, Engineer, *Fecit.*